Chapter 4

Environmental Consequences

Introduction and Purpose of the Chapter

This Chapter provides a description of the impacts on the quality of the human environment for each of the proposed alternative actions. Integral to the analysis is a concept that growth indices (population/economics) can be estimated into the future and that trust lands would attempt to participate in varying degrees to the expected growth. Demographic analyses are used to predict the relative scale (acres) and location of future growth in the state. Information is summarized on a regional basis that corresponds to DNRC administrative land office regions.

Estimates of new growth are summarized by Land Office Region together with the corresponding share of growth expected on trust lands. The acres of new residential, commercial, industrial, and conservation uses sets the framework for identifying and evaluating effects of implementing each of the PEIS's alternatives.

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4.1 INTRODUCTION

DNRC has used available data to predict environmental effects associated with each alternative. A level of uncertainty is associated with any exercise in predicting outcomes, especially where natural systems are involved. The prediction of effects on environmental resources described in this chapter of the Programmatic EIS is intended to allow a comparison of alternatives.

Trust lands are located throughout Montana and are influenced to varying degrees by land use growth and development of the nearby communities. In some situations, trust lands are becoming surrounded by new growth and may be an essential component for orderly growth and development of a community. For most situations, it would be appropriate and responsible for the REMB to participate in the local community planning processes.

Commercial and industrial development on trust lands would likely occur in urban areas or along major transportation corridors. Residential development opportunities would likely be greater in the western Montana Land Office areas (Northwestern, Southwestern, and Central) as compared to the eastern Montana (Northeastern, Southern, and Eastern) Land Office areas. New development on trust lands through the year for commercial, industrial, or residential uses is likely to total less than one percent of the total trust land area.

4.1.1 Land Base and Filtration Methodology

Trust land represents approximately 5.4 percent of the total land area in Montana. The total trust land acreage serves as a pool of potential land available for residential, commercial, industrial, and agricultural uses. Under the plan alternatives of this PEIS, a funnel filtration process is described to reduce the available pool of lands to only those that may have high suitability for real estate opportunities. Methodology is described in Chapter 2 that explains how lands are screened through physical, transitional, and market filters to narrow the type of lands that might have some potential for development or conservation. Additional filters would be used at a project level to define project level opportunities.

4.1.2 Growth Indices

Chapter 3 sets the historical background to population and economic growth in Montana. The information in Table 3-3 is used to help estimate future population and economic growth through the year 2025, which is presented in table 4-1. The population of Montana is expected to increase from approximately 903,00 (2000) to 1.16 million by the year 2025. Most of the increased population growth and associated development is expected in the westerly land office regions (CLO, NWLO, SWLO) of the state. Populations within the Northeastern Land Office and Eastern Land Office are expected to decline.

Table 4-1. Population and Income Projections* by Land Office Region

	2000	2005	2010	2015	2020	2025
Northwestern Land Office (NWLO)						
TOTAL POPULATION (THOUSANDS)	130.476	142.142	154.293	166.84	179.68	193.044

Table 4-1. Population and Income Projections* by Land Office Region						
	2000	**2005**	**2010**	**2015**	**2020**	**2025**
NONFARM LABOR INCOME	1672.308	1928.284	2186.426	2462.842	2761.298	3085.053
PERSONAL INCOME	2704.567	3119.866	3554.505	4030.761	4556.281	5138.890
PCI	20728.46	21948.94	23037.37	24159.44	25357.75	26620.30
Southwestern Land Office (SWLO)						
TOTAL POPULATION (THOUSANDS)	190.216	201.85	216.04	230.708	245.88	261.605
NONFARM LABOR INCOME	2823.635	3205.967	3625.740	4079.457	4575.769	5122.714
PERSONAL INCOME	4204.704	4761.363	5428.979	6165.806	6980.874	7883.928
PCI	22104.89	23588.62	25129.51	26725.58	28391.38	30136.76
Central Land Office (CLO)						
TOTAL POPULATION (THOUSANDS)	285.947	299.152	314.599	330.854	347.833	365.603
NONFARM LABOR INCOME	4356.937	4874.543	5426.837	6031.102	6688.235	7400.337
PERSONAL INCOME	6675.899	7492.185	8315.138	9226.090	10232.14	11342.61
PCI	23346.63	25044.74	26430.91	27885.68	29416.83	31024.39
Northeastern Land Office (NELO)						
TOTAL POPULATION (THOUSANDS)	79.729	78.045	77.427	77.038	76.827	76.759
NONFARM LABOR INCOME	780.9301	841.0773	895.4571	955.1436	1021.023	1093.873
PERSONAL INCOME	1623.319	1778.706	1887.169	2006.996	2139.766	2286.971
PCI	20360.46	22790.77	24373.53	26052.03	27851.75	29794.17
Southern Land Office (SLO)						
TOTAL POPULATION (THOUSANDS)	169.039	177.638	186.731	196.342	206.354	216.874
NONFARM LABOR INCOME	2806.166	3110.595	3427.488	3775.578	4158.862	4582.347
PERSONAL INCOME	4124.626	4581.461	5059.633	5589.857	6179.484	6837.376
PCI	24400.44	25791.00	27095.84	28470.00	29946.03	31526.95
Eastern Land Office (SLO)						
TOTAL POPULATION (THOUSANDS)	48.009	47.284	47.287	47.434	47.647	47.952
NONFARM LABOR INCOME	614.0315	691.2994	749.6756	810.4908	873.7881	939.6587
PERSONAL INCOME	1005.657	1114.330	1195.929	1283.100	1376.427	1476.556
PCI	20947.26	23566.76	25290.86	27050.22	28888.02	30792.38
Montana						
TOTAL POPULATION (THOUSANDS)	903.416	946.111	996.377	1049.216	1104.221	1161.837
NONFARM LABOR INCOME	13054.00	14651.76	16311.62	18114.61	20078.97	22223.98
PERSONAL INCOME	20338.77	22847.91	25441.35	28302.61	31464.98	34966.33
PCI	22513.18	24149.29	25533.86	26975.01	28495.18	30095.73

Table 4-1. Population and Income Projections* by Land Office Region						
	2000	2005	2010	2015	2020	2025
Table Notations: Income is expressed in 2000 dollars, PCI = Per Capita Income Source: Polzin 2004						

The regional growth estimates in the previous table were used to model the number of acres that would be developed for rural residential and commercial/industrial uses (Jackson 2004, Appendix XXX)) Expected growth of residential uses (lot sizes >1acre <26 acres) and commercial/industrial land uses within land office regions for all land ownerships is described in Tables 4-2 and 4-3 and in Map Exhibits 4-1 and 4-2 It is anticipated that most of the new single-family residential opportunities would be achieved through sale, while most of the industrial and commercial (including multi-family residential) opportunities would be achieved through lease. Conservation opportunities are not necessarily restricted by alternative but the growth in conservation acres is less predictable since this type of land use is not necessarily linked to market (growth) conditions. Most of the conservation objectives would be achieved through the lease or sale of development rights or purchase of conservation easements.

Table 4-2. Growth Estimates for Rural Residential Acreages on all Land Ownerships

Land Office Region	Growth Estimates (acres) by Time Period				
	2003-2010	2011-2015	2016-2020	2021-2025	Totals
NWLO	10,776 – 17,960	7,016 – 11,694	7,181 – 11,968	7,474 – 12,456	32,446-54,078
SWLO	8,575 – 14,291	5,918 – 9,863	6,122 – 10,203	6,344 – 10,574	26,959-44,931
CLO	2,739 – 4,565	5,293 – 8,821	5,570 – 9,283	5,818 – 9,696	19,420-32,365
NELO	(225) – (135)	46 - 76	67 - 111	96 – 160	(16) - 212
SLO	3,270 – 5,450	2,197 – 3,661	2,289 – 3,815	2,405 – 4,008	10,161-16,934
ELO	(213) – (128)	31 - 51	72 - 120	49 - 81	(61) - 124
Grand Total	24,922 – 42,003	20,501 – 34,166	21,301 – 35,400	22,186 – 36,975	88,909-148,644

Source: Jackson 2004

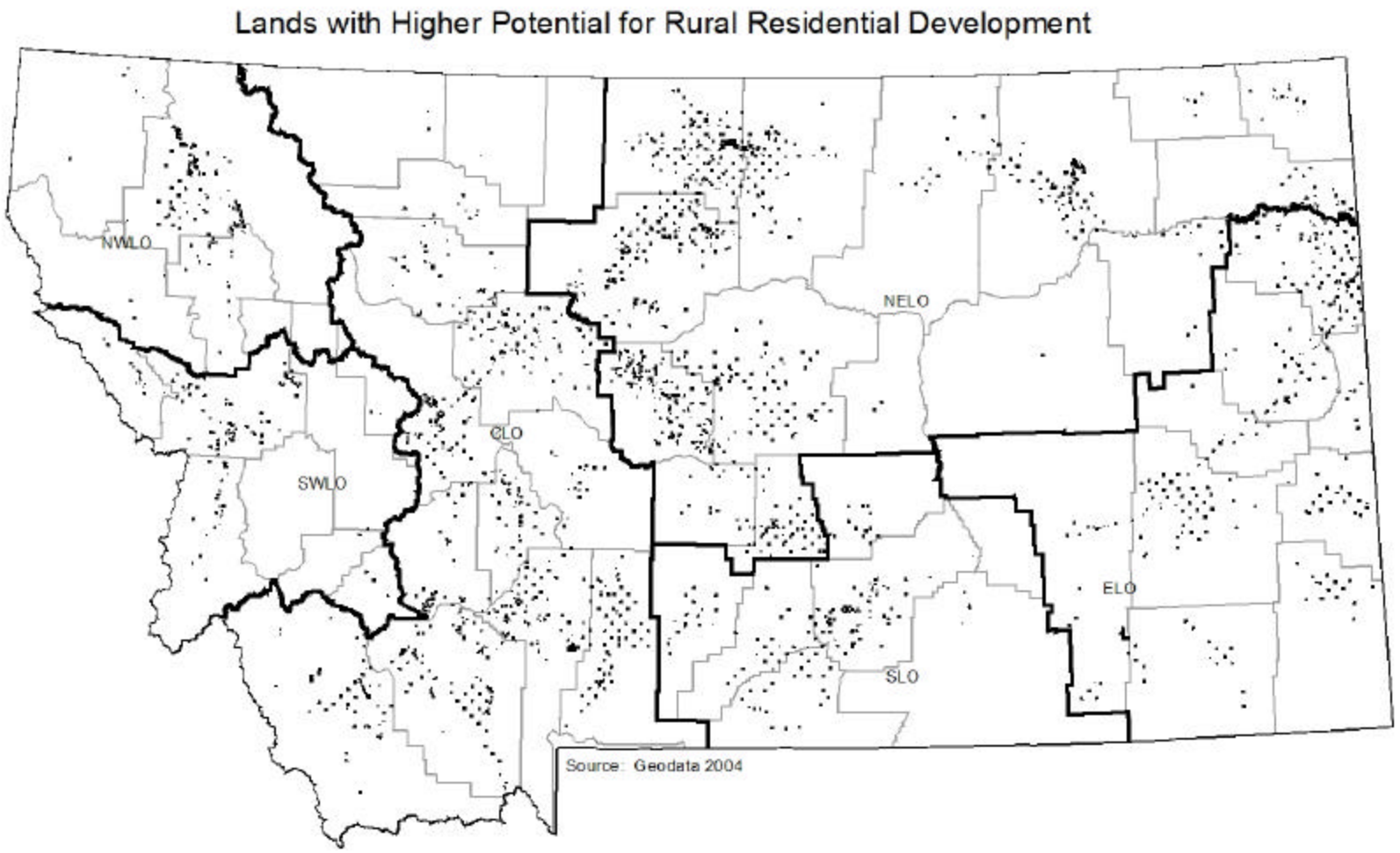
Table 4-3. Growth Estimates for Commercial/Industrial Acreages on all Land Ownerships

Land Office Region	Growth Estimates (acres) by Time Period				
	2002-2010	2011-2015	2016-2020	2021-2025	Totals
NWLO	2,540 – 4,234	1,678 – 2,796	1,854 – 3,090	2,051 – 3,418	8,123-13,538
SWLO	3,157 – 5,261	2,090 – 3,483	2,344 – 3,906	2,615 – 4,358	10,206-17,008
CLO	3,784 – 6,306	2,379 – 3,965	2,685 – 4,475	2,977 – 4,961	11,825-19,707
NELO	777 – 1,295	615 – 1,025	668 – 1,114	736 – 1,226	2,796-4,660
SLO	2,606 – 4,344	1,725 – 2,875	1,935 – 3,225	2,159 – 3,598	8,425-14,042
ELO	320 - 533	132 - 220	155 - 258	170 - 283	777-1,294
Grand Total	13,184 – 21,973	8,619 – 14,364	9,641 – 16,068	10,708 – 17,844	42,152-70,249

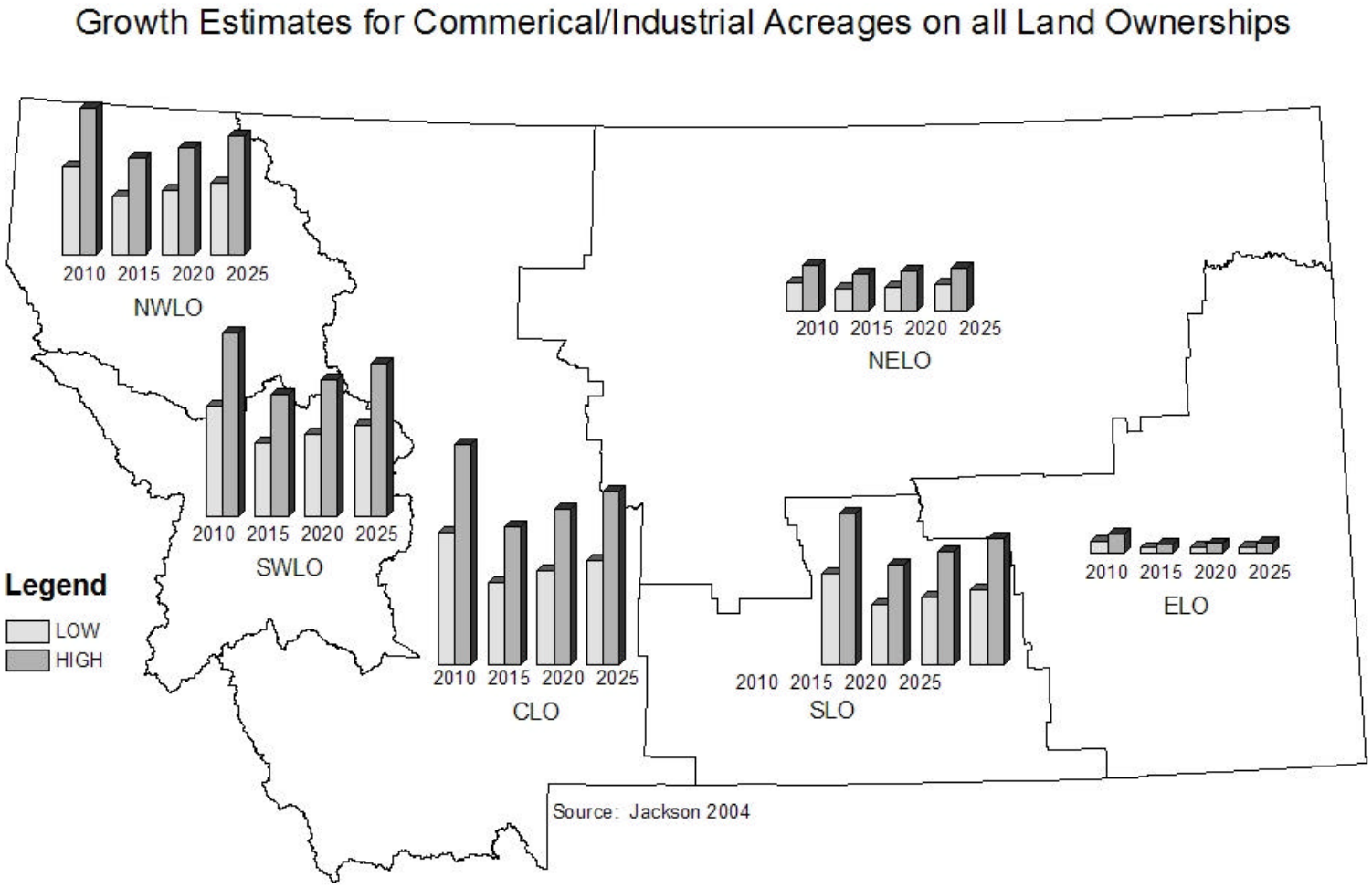
Source: Jackson 2004

The Trust Land share of growth in each of these land office regions varies by alternative as described in Chapter 2, Section 5.

Map Exhibit 4-1



Map Exhibit 4-2



4.1.3 Summary Description of Alternatives

This section provides a summary of the estimated number of acres of trust lands that would be reclassified to "other", including conservation, or developed for residential, commercial, or industrial uses under each alternative through the year 2025. Detailed descriptions of each alternative are included in Chapter 2.

4.1.3.1 Alternative A – Current Program

Implementation of Alternative A would result in DNRC continuing the current administration of the Real Estate Management Program. The number of new acres estimated for residential, commercial, and industrial uses on trust lands under the current program, for each land office, is displayed in Table 4.4.

TABLE 4-4. ALTERNATIVE A – Estimated Number of New Developed and Conservation Acres on Trust Lands Through the Year 2025*

	LAND OFFICE REGION						
Land Use Designation	**NWLO**	**SWLO**	**CLO**	**NELO**	**SLO**	**ELO**	**Totals**
Residential	2,163	1,258	1,036	4	271	1	4,733
Commercial/Industrial	555	489	647	172	231	42	2,136
Conservation	778	375	3,975	4,668	130	649	10,575
Total	3,496	2,122	5,658	4,844	632	692	17,444

* These are mid range values and the actual acreages could vary by plus or minus 25%

Source: Jackson 2004

Under Alternative A, the estimated acres of new industrial and/or commercial use ranges from 42 in the Eastern Land Office to 647 in the Central Land Office and 2,136 acres for all Land Office areas. The total commercial/industrial acreage estimate would represent approximately 0.04 percent of the total Trust Land in Montana. The estimated number of new residential acres under Alternative A ranges from 1 in the Eastern Land Office to 2,163 in the Northwestern Land Office. The total developed residential acreage of 4,733 would represent 0.09 percent of the total Trust Land in Montana.

The REMB would try to secure approximately 10,575 acres of conservation lands (including purchased development rights) during the life of the Plan.

4.1.3.2 Alternative B – Diversified Portfolio

Under this alternative, the REMB would actively participate in the regional market economy by trying to keep pace competitively with the development growth related to residential, commercial, and industrial uses. The REMB would need additional staff and funding to proportionally share in the anticipated growth of those 3 land

use sectors (refer to Chapter 2. The number of new developed and conservation acres is estimated Table 4-5.

TABLE 4-5. ALTERNATIVE B – Estimated Number of New Developed and Conservation Acres on Trust Lands Through the Year 2025*

	LAND OFFICE REGION						
Land Use Designation	**NWLO**	**SWLO**	**CLO**	**NELO**	**SLO**	**ELO**	**Totals**
Residential	4,325	2,515	2,072	9	541	3	9,465
Commercial/Industrial	1,083	953	1,262	335	449	83	4,165
Conservation	1,348	813	7,196	7,091	456	1,299	18,203
Total	6,756	4,281	10,530	7,435	1,446	1,385	31,833

* These are mid range values and the actual acreages could vary by plus or minus 25%

New commercial and/or industrial uses under Alternative B would total approximately 4,165 acres or about 2,029 acres more than anticipated by Alternative A. Development of 3,298 acres of commercial/industrial uses in western Montana Land Office areas (Northwestern, Southwestern, and Central Land Office areas) would represent about 0.18 percent of the total trust land area in those Land Office areas. Overall, new commercial and industrial acres would total less than 0.01% of the total trust land area.

New residential acres would total approximately 9,465 acres, with most of the related development occurring in the western land offices. Residential development in the 3 westerly land offices would exceed that of easterly land offices by over eight times (4,587 acres versus 553 acres, respectively). Conversion of 4,587 acres to residential use in the 3 most western Land Office areas would represent about 0.25 percent of the total Trust Lands in those Land Office areas. Overall, new residential acres would total less than 0.1% of the total trust land area.

The REMB would try to secure approximately 18,203 acres of conservation lands (including purchased development rights) during the life of the Plan.

4.1.3.3 Alternative B-1 – Diversified Portfolio, Conservation Priority

Under this Alternative, the REMB would strive to achieve the conservation acres shown in Table 4-5. Under B-1, the total estimate of 9,465 acres for new residential acres (Table 4-5) would be reduced to 4,732 acres to encourage additional opportunities for conservation uses on residentially valued properties.

4.1.3.4 Alternative C – Focused Portfolio

Implementation of Alternative C would result in the expansion of the Real Estate Management Program to secure more of the projected growth market in the state compared to Alternatives A and B, thereby increasing the revenue return to the state from selected

lands. The number of new developed and conservation acres under Alternative C is estimated in Table 4.6.

TABLE 4-6. ALTERNATIVE C – Estimated Number of New Developed and Conservation Acres on Trust Lands Through the Year 2025*

	LAND OFFICE REGION						
Land Use Designation	**NWLO**	**SWLO**	**CLO**	**NELO**	**SLO**	**ELO**	**Totals**
Residential	8,652	5,032	4,143	18	1,084	5	18,934
Commercial/Industrial	2,166	1,905	2,523	671	899	165	8,329
Conservation	1,780	1,208	9,701	9,438	738	1,554	24,419
Total	12,598	8,145	16,367	10,127	2,721	1,724	51,682

* These are mid range values and the actual acreages could vary by plus or minus 25%

New commercial/industrial acres range from 165 in the Eastern Land Office area to 2,523 in the Central Land Office area. Most of the new industrial and commercial uses would occur in the high growth areas of western and central Montana. The total estimated acres of 8,329 represents approximately 0.1% of the total trust land area.

Estimates of new residential acres range from 5 in the Eastern Land Office area to 8,652 acres in the Northwestern Land Office area under Alternative C. Eastern Montana Land Office areas (Northeastern, Southern, and Eastern) would see a combined total of 1,107 acres of residential acres versus 17,827 acres in the western Montana Land Office areas (Northwestern, Southwestern, and Central). The total residential estimate of 18,934 represents approximately 0.3% of the total trust land area.

Under Alternative C, the REMB would try to secure approximately 24,419 acres of conservation lands (including purchased development rights) during the life of the Plan.

4.1.3.5 Alternative C-1 – Focused Portfolio, Conservation Priority

Under this Alternative, the REMB would strive to achieve the conservation acres as shown in Table 4-6. Conservation use would generally be achieved through the lease or sale of development rights on lands with residential values. Under C-1, the total estimate of 18,934 acres for new residential acres (Table 4-6) would be reduced to 9,467 acres to encourage additional opportunities for conservation uses on residentially valued properties.

4.1.4 Regulatory Requirements

Commercial, industrial, and residential land uses in Montana are subject to three principle types of local land use policy. These include growth policies (formerly comprehensive or

master plans), zoning regulations and subdivision regulations. Descriptions of local land use policy and regulatory processes are located in Chapter 5.

In addition to local land use policy and regulatory requirements, activities conducted on Trust Lands will require compliance with a variety of other state regulations. Principle regulations include the Clean Water Act, Clean Air Act, and the Montana Antiquities Act. DNRC staff administers the Montana Antiquities Act as it applies to land use decisions. DNRC consults with Montana Department of Environmental Quality for administration and compliance with the Clean Air and Water Acts.

All activities must comply with water quality standards and air quality standards as adopted by the State of Montana. Proposed projects are reviewed to determine whether compliance with these standards will be achieved. Projects authorized by DNRC may require monitoring (air and/or water) to ensure that the developer or the agency is meeting applicable standards. Compliance with the State Antiquities Act requires DNRC to identify cultural or paleontological resources on Trust Lands, evaluate the significance of those resources, and determine feasibility of limiting, avoiding, or mitigating impacts to these resources.

In circumstances where local land use policies do not address the breadth of public involvement or environmental analysis that DNRC must adhere to in making project level decisions under the Montana Environmental Policy Act (MEPA), DNRC would review the project to address those elements. Detailed descriptions of site conditions and potential impacts would be completed on a project level basis for each land use proposal, whether generated by outside parties or DNRC through the funnel filtration process as described in Chapter 2.

4.1.5 Project Selection & Prioritization

Chapter 2, Section 3 describes a programmatic approach to the identification and selection of real estate opportunities on Trust Lands under each of the action alternatives. The approach is a systematic process that offers a filtration methodology for identifying lands that may ultimately be suitable for residential, conservation, commercial and/or industrial purposes. All Trust Lands would be "filtered" through a series of eight (8) processes to determine project level opportunities. The REMB would use an ID (Identification) Team approach to develop one, 3, and 5 year project lists (refer to Figure 2.5). Under the existing program of the REMB (represented by Alternative A), the project selection and prioritization methodology is less structured. Project opportunities are more often reactive than proactive and project priorities are identified from annual meetings of a Commercial Development Working Group.

4.2 PREDICTED EFFECTS ON ALL AFFECTED ENVIRONMENTAL RESOURCES

4.2.1 Statewide Demographic Relationships

4.2.1.1 Direct and Indirect Impacts

- Alternative A – Current Program

- Industrial and Commercial Uses – The current program is primarily reactive to commercial and industrial opportunities. Current program operations (staffing and funding) would probably limit the ability of the REMB to fully participate in market forces. It is assumed that commercial and industrial uses on Trust Lands would be less than proportional (land ratios) to similar development on other lands. Development on Trust Lands would not be growth (population) inducing since the same level of development and population growth would occur whether or not Trust Lands share in that growth.

- Residential Uses – The current program is primarily reactive to residential opportunities. Current program operations (staffing and funding) would probably limit the ability of the REMB to fully participate in market forces. It is assumed that rural residential uses on Trust Lands would be less than proportional (land ratios) to similar development on other lands. Development on Trust Lands would not be growth (population) inducing since the same level of development and population growth would occur whether or not Trust Lands shared in that growth.

- Conservation – The current program is primarily reactive to conservation opportunities on Trust Lands. The lease and sale of development rights and conservation leases, licenses, and easements would continue and would likely increase somewhat, based upon market demand and interest. Some marketing could be used to help identify parties that might have some interest in purchasing conservation rights. Additional conservation lands may encourage, but would not directly contribute to, new growth in the State.

- Alternative B – Diversified Portfolio
  - Industrial and Commercial Uses – The operation of the REMB under Alternative B would be more proactive than reactive to commercial and industrial opportunities. Program operations (staffing and funding) would be improved to fully participate in market forces. It is assumed that commercial and industrial uses on Trust Lands would be proportional (land ratios) to similar development on other lands. Development on Trust Lands would not be growth (population) inducing since the same level of development and population growth would occur whether or not Trust Lands share in that growth.

  - Residential Uses – The operation of the REMB under Alternative B would be more proactive than reactive to residential opportunities. Program operations (staffing and funding) would be improved to fully participate in market forces. It is assumed that residential

opportunities on Trust Lands would be proportional (land ratios) to those on other lands. Development on Trust Lands would not be growth (population) inducing since the same level of development and population growth would occur whether or not Trust Lands shared in that growth.

- Conservation Uses – Conservation opportunities would be pursued under this alternative. Land acreages with leased or purchased development rights would increase based upon market demand and interest. Marketing towards targeted organizations would be used to help focus interest on conservation opportunities. Additional conservation lands may encourage, but would not directly contribute to, new growth in the State.

- Alternatives B-1 – Diversified Portfolio – Conservation Priority – The program under Alternative B-1 would not differ from B with regard to the level of activity in the pursuit of residential, industrial/commercial, or conservation uses for Trust Lands. However, conservation uses (which would occur primarily on lands that have rural residential values) would reduce the number of acres placed in residential use. This would have the effect of directing rural residential development elsewhere in the market area. Additional conservation lands may encourage but would not directly contribute to new growth to the State.

- Alternative C – Focused Portfolio
  - Industrial and Commercial Uses – The operation of the REMB under Alternative C would be reactive and proactive to commercial and industrial opportunities. Program operations (staffing and funding) would be improved to fully participate in market forces. It is assumed that commercial and industrial uses on Trust Lands would be proportionally higher (land ratios) than what would occur on other lands. Development on Trust Lands would not be growth (population) inducing since the same level of development and population growth would occur whether or not Trust Lands shared in that growth.

  - Residential Uses – The operation of the REMB under Alternative C would be reactive and proactive to residential opportunities. Program operations (staffing and funding) would be improved to fully participate in market forces. It is assumed that residential opportunities on Trust Lands would be proportionally higher (land ratios) than what would occur on other lands. Development on Trust Lands would not be growth (population) inducing since the same level of development and population growth would occur whether or not Trust Lands shared in that growth.

- Conservation Uses – Conservation opportunities would be pursued under this alternative. Land acreages with leased or purchased development rights would increase based upon market demand and interest. Marketing towards targeted organizations would be used to help focus interest on conservation opportunities. Additional conservation lands may encourage, but would not directly contribute to, new growth in the State.

- Alternative C-1 – Focused Portfolio – Conservation Priority – The program under Alternative C-1 would not differ from C with regard to the level of activity in the pursuit of residential, industrial/commercial, or conservation uses for Trust Lands. However, conservation uses (which would occur primarily on lands that have rural residential values) would reduce the number of acres placed in residential use. This would have the effect of directing rural residential development elsewhere in the market area. Additional conservation lands may encourage but would not directly contribute to new growth to the State.

4.2.1.2 Cumulative Effects

The proposed alternatives would not create a demand for additional commercial, industrial, or residential uses. Rather, the program alternatives analyzed in the PEIS would allow the REMB to participate in the existing growth market in the state. Development of commercial, residential, or industrial uses on Trust Lands would not necessarily stimulate or promote growth on other state (non Trust) lands. No population increase would occur beyond what is projected for general community growth.

4.2.1.3 Residual Adverse Effects

No residual adverse effects would result with "growth" (residential, commercial, industrial) on Trust Lands associated with any of the alternatives presented in this PEIS. Growth would occur in accordance with land use policy and regulatory processes and MEPA analysis, as appropriate. An assumption is made that the same level of growth would occur, regardless (of whether it occurred on Trust Lands), since growth is a product of need and demand. In some situations, it could be demonstrated that Trust Lands may be better suited for growth and development than some non-Trust Lands. Population and economic conditions would not change under any of the alternatives.

4.2.1.4 Irretrievable and Irreversible Commitment of Resources

Implementation of the alternatives would not result in an irreversible or irretrievable commitment of resources. Compliance with local, state, and federal regulations and regulatory review processes would minimize the adverse effects of growth. There would be no additional demand on resources beyond what is projected for new growth in a particular land office region.

4.2.1.5 Short-Term Versus Long-Term Productivity

Trust Lands suitable in the near term for residential, commercial, conservation, and industrial uses would be suitable for similar uses in the long term. Market cycles provide for redevelopment or adaptive reuse of existing structures.

4.2.2 Real Estate Management Bureau

4.2.2.1 State-Wide Overview

The REMB of the TLMD would manage lands suitable for commercial, industrial, residential and conservation uses as described in Chapter 2 under all alternatives. This would include leasing and licensing lands for residential, commercial, industrial, and conservation uses. The REMB would also administer land sales, land exchanges, and land easements. Chapter 2 describes the current process for selecting projects that would continue under Alternative A, as well as the Funnel approach that would be used to select projects under all of the action alternatives (see Figure 2-4 in Chapter 2). Program emphasis, staffing, and funding resources would vary by alternative. Map Exhibits 4-1 and 4-2 display the general locations of trust lands that have been initially screened as having higher potential for rural residential and commercial/industrial uses (See report by Geodata Services 2004).

4.2.2.2 Direct and Indirect Impacts

- Alternative A – Current Program
  - Industrial and Commercial Uses – The current program is primarily reactive to commercial and industrial opportunities. Current program operations (staffing and funding) would probably limit the ability of the REMB to fully participate in market forces. Staffing levels and staffing expertise would not appreciably change under this alternative. The availability of funding for improving land entitlements would probably remain constant to the current situation.

  - Residential Uses – The current program is primarily reactive to residential opportunities. Current program operations (staffing and funding) would probably limit the ability of the REMB to fully participate in market forces. Staffing levels and staffing expertise would not appreciably change under this alternative. The availability of funding for improving land entitlements would probably remain constant to the current situation.

  - Conservation Uses – The current program is primarily reactive to conservation opportunities on Trust Lands. The lease, license or sale of development rights would be an option if properly authorized by legislation. Conservation leases and licenses would be other mechanisms to accommodate conservation objectives.

- Alternative B – Diversified Portfolio

- Industrial and Commercial Uses – The operation of the REMB under Alternative B would be more proactive than reactive to commercial and industrial opportunities. Program operations (staffing and funding) would be improved to fully participate in market forces. Staffing levels would increase by three FTEs (Professional Engineer, Lease Administrator, Surveyor) to help respond more quickly to market opportunities. Staffing expertise would be expanded to consider greater involvement with land use planning and commercial and industrial leasing. Additional funding beyond current levels would be necessary to improve entitlements to property. Approximately $500,000 annually would be authorized as new expenditures for land entitlement improvements (infrastructure, zoning, etc).

- Residential Uses – The operation of the REMB under Alternative B would be more proactive than reactive to residential opportunities. Program operations (staffing and funding) would be improved to fully participate in market forces. Staffing levels would increase (see above) to help respond more quickly to market opportunities. Staffing expertise would be expanded to consider greater involvement with land sales. Additional funding beyond current levels would be necessary to improve entitlements to property. Funding for improved land entitlements would not be in addition to the funding identified above.

- Conservation Uses – Conservation opportunities would be pursued under this alternative. Conservation lands would be in addition to the number of acres placed in developed use. Land acreages with leased or purchased development rights or conservation rights would increase based upon market demand and interest. Efforts to market, promote, and implement conservation opportunities would benefit from the increased staffing identified above.

- Alternative B-1 – Diversified Portfolio – Conservation Priority – The program under Alternative B-1 would not differ from B with regard to the level of activity in the pursuit of residential, industrial/commercial, or conservation uses for Trust Lands. Funding and staff requirements under Alternative B-1 would be similar to those required under Alternative B.

- Alternative C – Focused Portfolio
  - Industrial and Commercial Uses – The operation of the REMB under Alternative C would be proactive to commercial and industrial opportunities. Program operations (staffing and funding) would be improved to fully participate in market forces. Staffing levels would increase by one FTE (land Use Planner) over Alternative B to help respond more quickly to market

opportunities. Staffing expertise would be expanded to consider greater involvement with land use planning and commercial and industrial leasing. Approximately $1 million annually would be authorized as new expenditures for land entitlement improvements (infrastructure, zoning, etc).

- Residential Uses – The operation of the REMB under Alternative C would be proactive to residential opportunities. Program operations (staffing and funding) would be improved to fully participate in market forces. Staffing levels would increase (see above) to help respond more quickly to market opportunities and staffing expertise would be expanded to consider greater involvement with land sales. Additional funding (see above) would be necessary to improve entitlements to property.

- Conservation Uses – Conservation opportunities would be pursued under this alternative. Conservation lands would be in addition to the number of acres placed in developed use. Land acreages with leased or purchased development rights or conservation rights would increase based upon market demand and interest. Land acreages with leased or "purchased development rights" would increase based upon market demand and interest. Efforts to market, promote, and implement conservation opportunities would benefit from the increased staffing identified above.

- Alternative C-1 – Focused Portfolio – Conservation Priority – The program under Alternative C-1 would not differ from C with regard to the level of activity in the pursuit of residential, industrial/commercial, or conservation uses for Trust Lands. Funding and staff requirements under Alternative C-1 would be similar to those required under Alternative C.

4.2.2.3 Cumulative Effects

There would be no cumulative effects to other state agencies from the proposed administration of the REMB under any of the alternatives. To the extent possible, new staff for the REMB would be achieved without additional FTEs through adjustment of existing staff assignments within the TLMD.

4.2.2.4 Residual Adverse Effects

There would be no residual adverse effects from the proposed administration of the REMB. The program would be operated to serve the financial interest of the Trusts while considering environmental resources under any of the alternatives

4.2.2.5 Irretrievable and Irreversible Commitment of Resources

There would be no irretrievable and irreversible effects from the proposed administration of the REMB under any of the alternatives.

4.2.2.6 Short Term versus Long Term Productivity

The TLMD is a first and foremost an asset management organization. Under all alternatives, as resources allow, it would evaluate the entire land base of Trust Lands and choose those portfolio and fiscal options that serve the long-term interests of the trusts.

4.2.3 Economics

4.2.3.1 Statewide Overview

The TLMD manages lands under four broad categories of use including forest management, agriculture, grazing and real estate. The largest share of income is from agriculture and grazing due to the vast acreages involved in those uses. Income form uses managed by the REMB contributes approximately 4 percent to the total annual trust revenue. However, on revenue per acre basis, commercial, industrial, residential and conservation uses generate over $54 per acre, dwarfing agriculture and grazing at $2.80 per acre. Although the acreage of new real estate lands is expected to remain under 1 percent of the total Trust Land acreage, the percentage of revenue from commercial, residential, industrial and conservation uses is expected to increase under all alternatives.

An economic analysis of each proposed alternative was prepared by Jackson (2004) and is included in Appendix D. Information in the report includes statistics related to revenue, expenses, rates of return, taxes, jobs, and personal income.

4.2.3.2 Direct and Indirect Impacts

- Alternative A – Current Program – Gross annual revenue under this alternative would be approximately $3.8 million. This reflects income from leases and interest from the permanent trust fund. Estimated average rates of return for Alternative A would be approximately 2.76%.
- Alternative B – Diversified Portfolio – Gross annual revenue under this alternative would be approximately $4.7 – $5.3 million. Estimated average rates of return from Alternative B would be 4.66 – 5.13 percent. The latter higher rate of return would be achieved by funding improvements to enhance land entitlements.
- Alternative B-1 – Diversified Portfolio – Conservation Priority – Gross revenue under this alternative would be less than under Alternative B. While the REMB would seek to obtain residential value through the sale or lease of development and conservation rights, the value of those rights would vary somewhat depending on associated entitlements. The conservation market and legislative authorizations would ultimately decide the amount and mix of conservation strategies. In a general sense, annual rent (lease or license) for development or conservation rights would generate a higher rate of return as compared to permanent disposition of rights through a single purchase. If leasing were the predominant tool for securing the rights, the rate of return

under B-1 would be slightly less than that of Alternative B. The rate of return could be substantially less than Alternative B if the predominant tool for securing development and conservation rights is accomplished with permanent disposition.

- Alternative C – Focused Portfolio – Gross annual revenue under this alternative would be approximately $6.4 – 7.8 million. Estimated average rates of return from Alternative C would be 5.48 – 6.27 percent. The latter higher rate of return would be achieved by funding improvements to enhance land entitlements.
- Alternative C-1 – Focused Portfolio – Conservation Priority – Gross revenue under this alternative would be slightly less than under Alternative C. Calculation of the rate of return for conservation emphasis depends on the method of disposition as per the logic discussed in B-1, above. In general, costs of Alternative C-1 remain fixed so if the income were reduced from the loss of residential revenue (9,467 acres less than Alternative C) then the rate of return would be correspondingly reduced.

4.2.3.3 Cumulative Effect

Increasing commercial, industrial and residential uses would create additional tax benefits to local communities and increase revenue to the schools of Montana under all alternatives.

4.2.3.4 Residual Adverse Effects

There would be no residual adverse effects from increased revenue to the Trusts under any of the alternatives.

4.2.3.5 Irretrievable and Irreversible Commitment of Resources

There would be no irretrievable and irreversible effects under any of the alternatives.

4.2.3.6 Short Term versus Long Term Productivity

Increased revenue would be from annual lease payments and interest from the permanent fund. Revenue objectives are intended to promote the long-term interests of the various Trusts through a combination of income strategies and general portfolio management within all the bureaus of the TLMD. All permanent dispositions of land are subject to a project level MEPA analysis that would help evaluate short versus long-term "productivity".

4.2.4 Real Estate Transactions and Authorizations

4.2.4.1 Statewide Overview

Under 77-1-204, MCA the state can sell, participate in land banking, purchase, lease or exchange Trust Lands when, in the State Board of Land Commissioner's judgment, it is advantageous to do so. These transactions and authorizations are detailed in Chapter 3, Section 3.2.4.

4.2.4.2 Direct and Indirect Impacts

- Alternative A – Current Program
  - Industrial and Commercial Uses – Under Alternative A, commercial and industrial development would generally not make use of the REMB land banking program. Land exchanges would occur primarily in response to inquiries. However, if the staff is able to identify a clear advantage in pursuing a land exchange, the Bureau may initiate a transaction as resources allow. In most cases the REMB would lease rather than sell land associated with industrial and commercial developments.

  - Residential Uses – Under Alternative A, residential development would generally not make use of the REMB land banking program. Land exchanges would occur primarily in response to inquiries. However, if the staff is able to identify a clear advantage in pursuing a land exchange, the Bureau may initiate a transaction as resources allow. Land sales would not be a high priority. However, objectives related to new residential opportunities would mostly be achieved through "sale" as opposed to leasing.

  - Conservation Uses – Under Alternative A, conservation uses would be achieved primarily through conservation leases, licenses, and easements or through the lease, license, or sale of development rights if properly authorized by legislation.

- Alternatives B – Diversified Portfolio and Alternative B-1 – Conservation Priority
  - Industrial and Commercial Uses – Under Alternative B, the REMB would use land exchanges on a limited basis to acquire lands with higher commercial and industrial revenue generating potential. In addition, the Bureau would also, to some extent, use land banking to acquire lands that are well positioned to take advantage of future revenue generation and lands that have an existing revenue stream (existing revenue producing activities on the land). These might include active commercial and industrial enterprises.

    Under Alternative B, the REMB would respond to inquiries related to land exchanges. In addition, the Bureau would seek land exchange opportunities that would result in better present and future income. The REMB would also consider land exchanges that would result in a mixed acquisition wherein equal acres would be achieved in addition to other property that would have immediate income potential.

  - Residential Uses – Under Alternative B, land sales and land banking would be the primary tool to achieve the residential objectives. For example, if 40 acres of Trust Lands are sold at residential land

values, then that 40 acres would be credited towards the share of residential growth on Trust Lands.

- Conservation Uses – Under Alternatives B and B-1, conservation uses would be achieved primarily through conservation leases, licenses, and easements or through the lease, license, or sale of development rights if properly authorized by legislation.

- Alternatives C – Focused Portfolio and C-1 – Conservation Priority
  - Industrial and Commercial Uses – The REMB would use Land Banking to capture existing properties with high revenue streams. The Bureau would also use Land Banking to position itself in areas of high growth so that it can easily respond to opportunities in the market to maximize its revenue. The REMB would consider those land exchanges that would result in the acquisition of both undeveloped land and land with improvements that provide an existing income stream.

  - Residential Uses – Most of the residential objectives for new residential growth would be accomplished through land sales. Land sales under Alternative C would be considered in conjunction with joint ventures and partnerships between the REMB and private and/or public entities. Under this approach, the joint venture/partnerships would make physical improvements to the land and seek those land use designations that would improve overall marketability. Once the maximum entitlements are achieved, the land would be sold and the partners would share in the profits associated with the improvements.

  - Conservation Uses – Under Alternatives C and C-1, conservation uses would be achieved primarily through conservation leases, licenses, and easements or through the lease, license, or sale of development rights if properly authorized by legislation.

4.2.4.3 Cumulative Effects

Under all alternatives, land transactions would be used to increase revenue potential and/or to position Trust Lands to take advantage of opportunities in the residential, industrial and commercial sectors. The exchange, sale and banking of lands will, over time, provide the TLMD with better asset base.

4.2.4.4 Residual Adverse Effects

Montana statutes governing land sales, exchanges and land banking require that the transactions produce a result that is equal to or exceeds the pre-transaction condition. No residual adverse effects are expected to occur as a result of these activities.

4.2.4.5 Irretrievable and Irreversible Commitments of Resources

Sales or exchanges of land are irretrievable and irreversible in most cases. The REMB will consider each land transaction on a project level basis using a MEPA analysis to carefully assure that land transactions meet the mission of the TLMD – to provide revenue to the Trust and to protect the long term revenue capacity of the land.

4.2.4.6 Short Term versus Long Term Productivity

Under all alternatives, the REMB would evaluate the entire land base of Trust Lands and would utilize those land transactions that serve the long-term interests of the Trusts. The REMB is only one Bureau with revenue-generating objectives for the trust. A highest and best use analysis would determine project level opportunities for the REMB.

4.2.5 Geology and Soil

4.2.5.1 Statewide Overview

Geological resources would not be affected by the Alternatives being evaluated in this Programmatic EIS and therefore, geological resources are not evaluated further in this section. Soil resources on Trust Lands vary according to setting and parent material. Potential impacts from implementation of the Alternatives to soil resources would be similar for all land office geographic areas.

Descriptions of existing geological and soil resources on Trust Land is included in Chapter 3 – Affected Environment. Descriptions of the Alternatives are included in Chapter 2.

4.2.5.2 Direct and Indirect Impacts

The direct and indirect impacts are addressed under each alternative. It is assumed that conservation uses under all alternatives would have no affect on soil resources.

- Alternative A – Current Program
  - Industrial and Commercial Uses – Implementation of Alternative A would result in conversion of the current land use on selected Trust Lands (agriculture, grazing, or timber) to industrial and/or commercial uses. Potential effects on the soil resource include compaction, stockpiling (loss of biological activity, reduction in soil fertility), and soil loss due to handling and soil salvage. Depending on the vegetative condition, existing erosion, or general soil condition on specific lands, conversion to industrial and/or commercial uses may or may not result in an increase in sediment and soil loss during construction activity and subsequent operations of facilities. For lands where soil compaction, loss, and reduction in fertility or sediment contribution to waterways is occurring, conversion of use to industrial and/or commercial could result in a reduction in sediment loss as a consequence of paving or covering

disturbance areas. For other lands, conversion could result in construction activities that would increase land disturbance on a specific tract, thereby increasing exposure of bare-mineral soil to wind and water erosion.

Commercial and industrial development would likely occur within locally zoned areas where specific sediment control, best management practices, and construction management controls must be complied with by the developer. Short-term soil losses would occur during construction. However, compliance with local zoning requirements would reduce losses to permissible levels.

- Residential Uses – Continuation of the current Real Estate Management Program would result in conversion of selected Trust Lands to Residential uses. Developers of specific lands would be required to comply with applicable regulations and requirements pertaining to control of sediment and soil loss during construction of residential properties.

- Alternatives B – Diversified Portfolio and B-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives B and B-1 would result in an increase in the number of acres of Trust Land that would be reclassified from current land use and converted to industrial and/or commercial uses as compared to Alternative A. Potential impacts to soil resources would be similar to those described under Alternative A.

  - Residential Uses – Alternatives B and B-1 would result in an increase in the number of acres converted to Residential use under the REMB Leasing program as compared to Alternative A. (Under B-1, the number of acres converted to residential use could be reduced by as much as half of the projected amount.) Impacts to Trust Land as a result of conversion to Residential under this alternative would be similar to impacts described under Alternative A.

- Alternatives C – Focused Portfolio and C-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives C and C-1 would result in an increase in the number of acres of Trust Land that would be modified from current land use and converted to industrial and/or commercial uses as compared to Alternatives A, B and B-1. Potential impacts to soil resources would be similar to those described under Alternatives A, B and B-1.

  - Residential Uses – Alternatives C and C-1would result in an increase in the number of acres converted to Residential use under

the REMB Leasing program as compared to Alternatives A, B and B-1. (Under C-1, the number of acres converted to residential use could be reduced by as much as half of the projected amount.) Impacts to Trust Land as a result of conversion to Residential under this alternative would be similar to impacts described under Alternatives A, B and B-1.

4.2.5.3 Cumulative Effects

Implementation of any of the Alternatives would not result in an increased or additive impact (cumulative impact) to soil resources for any of the REMB Lease designated land uses described above. The Alternatives would not create a demand for conversion of current land use to commercial, industrial, conservation or residential uses. Rather, the program alternatives analyzed in the PEIS would allow the REMB to participate in the existing growth market in the state.

4.2.5.4 Residual Adverse Effects

No residual adverse effects to soil resources are anticipated to result from implementation of any of the Alternatives evaluated in this PEIS. Compliance with local zoning and subdivision laws and state and federal laws for controlling soil loss and sedimentation of waterways would reduce impacts to permissible levels.

4.2.5.5 Irretrievable and Irreversible Commitment of Resources

Implementation of any of the Alternatives would not result in an irreversible or irretrievable commitment of soil resources. Compliance with local, state, and federal requirements would limit soil losses associated with the REMB Leasing program.

4.2.5.6 Short Term versus Long Term Productivity

Short-term impacts to the soil resource include impacts described above. These short-term impacts to soil are not expected to impact long-term productivity of the soil resource on Trust Lands included in the program.

4.2.6 Water Resources

4.2.6.1 Statewide Overview

Surface water resources in Montana range from streams originating in the mountains in western Montana to lakes and rivers flowing westward and eastward from the Continental Divide. Water quality varies depending on geology, water use, and treatment efficacy. Headwater systems in the mountains of the state generally exhibit high quality water. As water flows into larger rivers and lake systems, the water quality changes in response to increases in dissolved solids as a result of water use and return flow to river systems.

Groundwater quantity and quality varies across the state as a function of geologic setting, groundwater withdrawal, water use, and infiltration and recharge to aquifer systems. Groundwater is generally considered to be of high quality in the mountainous areas of the state where recharge is from precipitation and high quality surface water systems. Groundwater in some areas of the state reflects the geologic setting and can contain elevated levels of dissolved solids and trace elements.

Descriptions of existing water resources in Montana and on Trust Land is included in Chapter 3 – Affected Environment. Descriptions of the Alternatives are included in Chapter 2.

4.2.6.2 Direct and Indirect Impacts

The direct and indirect impacts are addressed under each alternative. It is assumed that conservation uses under all alternatives would have no affect on water resources.

- Alternative A – Current Program
  - Industrial and Commercial Uses – Implementation of Alternative A would result in conversion of the current land use on selected Trust Land lands (agriculture, grazing, or timber) to industrial and/or commercial uses. Potential effects on water resources from conversion to commercial and industrial land uses include changes in water quality as result of increased runoff (i.e., increase dissolved solids concentration from exposure to parking lots or paved areas), diversion of surface water flow, increase in concentration of suspended sediment (i.e., during construction periods), reduced recharge to groundwater, changes to groundwater quality from infiltration systems (i.e., sites where municipal stormwater systems are not available), and an increase in volume of water reporting to municipal or local water treatment systems.

    Industrial and commercial activities would require that additional water supply be provided to meet the demand for water associated with these activities. Increases in acreage converted to these uses could affect capacities of current water supply systems, sewage treatment systems, and stormwater handling systems for municipalities.

    Depending on vegetative condition, existing erosion, and general soil condition on specific lands, conversion to industrial and/or commercial uses may or may not result in an increase in sediment and soil loss during construction activity and subsequent operations of facilities. For lands where soil compaction, loss, and reduction in fertility or sediment contribution to waterways is occurring, conversion of use to industrial and/or commercial could result in a reduction in sediment loss as a consequence of paving or covering disturbance areas. For other lands, conversion could result in construction activities that would increase land disturbance on the specific tract, thereby increasing exposure of bare-mineral soil to wind and water erosion.

    Commercial and industrial development of these lands would likely occur within locally zoned areas where specific sediment control, best management practices, and construction management controls must be complied with by the developer. Short-term impacts to

water quality could occur during construction; however, compliance with stormwater regulations and state water quality standards would reduce impacts to permissible levels.

- Residential Uses – Continuation of the current Real Estate Management Program would result in conversion of selected Trust Lands to residential uses. Potential effects to water resources from residential development include changes in surface water flow; changes in groundwater quality from septic systems (i.e., increased nitrate concentration) where municipal sewage treatment is not available; increase in withdrawal of groundwater for domestic use possibly resulting in lowering water tables locally (in locations where a municipal water source is not available); increase in suspended sediment in surface water (unpaved roads and during construction activities); and an increase in surface water runoff from roads and developed areas.

  Developers of residential properties are required to comply with applicable regulations and requirements pertaining to properly site and design septic systems to meet state requirements or to connect to public facilities.

- Alternatives B – Diversified Portfolio and B-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives B and B-1 would result in doubling the number of acres of Trust Land that would be reclassified from current land use and converted to industrial and/or commercial uses as compared to Alternative A. Potential impacts to water resources would be similar to those described under Alternative A.

  - Residential Uses – Alternative B would result in doubling the number of acres converted to residential use under the Real Estate Management Program as compared to Alternative A. Under Alternative B-1 the number of acres converted to residential use could be reduced by as much as half of the projected amount. Impacts to water resources on Trust Land as a result of conversion to Residential under this alternative would be similar to impacts described under Alternative A.

- Alternatives C – Focused Portfolio and C-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives C and C-1 would result in doubling the number of acres of Trust Land that would be modified from current land use and converted to industrial and/or commercial uses as compared to Alternatives B and B-1. Potential impacts to water resources would be similar to those described under Alternative A.

- Residential Uses – Alternative C would result in doubling the number of acres converted to Residential use under the Real Estate Management Program as compared to Alternative B. Under Alternative C-1 the number of acres converted to residential use could be reduced by as much as half of the projected amount. Impacts to water resources on Trust Land as a result of conversion to Residential under this alternative would be similar to impacts described under Alternative A.

4.2.6.3 Cumulative Effects

Implementation of any of the Alternatives would not result in an increased or additive impact (cumulative impact) to water resources for any of the designated land uses described above. Continuation of the Current Program (Alternative A) or implementation of any of the action Alternatives would not create additional demand for conversion of current land use to commercial, industrial, or residential uses. Rather, the program alternatives analyzed in the PEIS would allow Montana's Trust Lands to participate in the existing growth market in the state.

4.2.6.4 Residual Adverse Effects

No residual adverse effects to water resources are anticipated to result from implementation of any of the Alternatives evaluated in this PEIS. Compliance with local zoning and subdivision and state and federal laws for controlling soil loss and sedimentation of waterways would reduce impacts to water resources to permissible levels. Compliance with water quality standards associated with commercial, industrial, and residential use of land would result in activities meeting applicable effluent limitations.

4.2.6.5 Irretrievable and Irreversible Commitments of Resources

Implementation of the Proposed Action and alternatives would not result in an irreversible or irretrievable commitment of water resources. Compliance with local, state, and federal requirements would limit water impacts associated with the REMB program.

4.2.6.6 Short Term versus Long Term Productivity

Short-term impacts to water resource include impacts described above. These short-term impacts to water resources are not expected to impact long-term productivity of the water resources on Trust Lands included in the program.

4.2.7 Fisheries

4.2.7.1 Statewide Overview

Fisheries on Trust Lands vary according to quantity and quality of water resources available to a particular species. Cold-water fisheries are dominant in the Northwest, Southwest, and Central Land Office areas; warm water fisheries are primarily found in the Northeast, East, and South Land Office areas. Potential impacts from implementation of any of the Alternatives to fisheries resources would likely result from increased sediment contribution to surface water from activity on selected lands. Potential effects of this sediment load are expected to be greater in the

Northwest, Southwest, and Central Land Offices than in the Northeast, East, and South Land Office areas since these areas have a higher percentage of developable land in proximity surface water. In addition, cold water fisheries are also less tolerant to sediment load increases than warm water species.

Special status fish species including bull trout, Yellowstone and westslope cutthroat trout. arctic grayling, and white sturgeon occur in the Northwest, Southwest, and Central Land Office areas. Potential sediment load increases resulting from development in these areas could have impacts to these species. Pallid sturgeon are found in the Missouri River and larger tributaries of the Northeast and East Land Office areas, which have fewer developable lands and therefore would likely experience less development activity (sediment loading) affecting this species.

Descriptions of existing fisheries resources on Montana and Trust Land is included in Chapter 3 – Affected Environment. Descriptions of the Alternatives are included in Chapter 2.

4.2.7.2 Direct and Indirect Impacts

The direct and indirect impacts are addressed under each alternative. It is assumed that conservation uses under all alternatives would have no affect on fisheries resources.

- Alternative A – Current Program
  - Industrial and Commercial Uses – Implementation of Alternative A would result in conversion of current land uses on selected Trust Lands (agriculture, grazing, or timber) to industrial and/or commercial uses. Potential effects on fisheries resources include a threat to spawning from increased sediment and contaminant loads and increased nutrients and reduced oxygen levels in surface water. Contaminant loading could increase potential for analyte concentrations to exceed water quality standards.

    Depending on the vegetative or general surface condition on specific lands, conversion to industrial and/or commercial uses may or may not result in an increase in sediment load to surface water during construction activity and subsequent operations of facilities. For lands where sediment contribution to surface waterways is occurring, conversion to industrial and/or commercial use could result in a reduction in sediment load as a consequence of paving or covering disturbance areas. Conversely, storm water runoff from engineered landscapes, and areas covered with asphalt or concrete paving could increase concentrations of contaminants from oil and grease, antifreeze, and fertilizers. Potential impacts to fisheries resources could also occur from increased sediment, nutrients, fertilizers, and other contaminants in return flow from irrigated crops and runoff from feedlots.

Where commercial and industrial development occurs within the jurisdiction of local municipalities, specific best management practices for construction management, sediment, and storm water runoff controls would be required of a developer. Runoff from the tract would report to storm water treatment facilities and as such, would be treated to meet effluent standards. In locations where storm water treatment is not available, infiltration into subsurface would reduce sediment loading to surface water. Short-term sediment losses would occur during construction; however, compliance with local zoning requirements would reduce losses to permissible levels.

- Residential Uses – Continuation of the current Real Estate Management Program would result in conversion of selected Trust Lands to residential uses. Potential effects to fisheries from residential development include changes in surface water flow; increase in suspended sediment in surface water (unpaved roads and construction activities); and an increase in surface water runoff from roads and developed areas.

  Developers of residential lands would be required to comply with applicable regulations and requirements pertaining to control of sediment, storm water runoff control during construction of residential properties, and use of best management practices.

- Alternatives B – Diversified Portfolio and B-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives B and B-1 would result in an increase in acres of Trust Land that would be reclassified from current land use and converted to industrial and/or commercial uses as compared to Alternative A. Potential impacts to fisheries would be similar to those described under Alternative A.

  - Residential Uses – Alternatives B and B-1 would result in an increase in the number of acres converted to residential use under the Real Estate Management Program as compared to Alternative A. Alternative B-1 would reduce the number of acres converted to residential use by up to one half. Impacts to fisheries resources as a result of conversion to residential use under this alternative would be similar to impacts described under Alternative A. However, increased sediment and soil loss could result from development of residential properties at levels associated with Alternative B as compared to Alternatives B-1 or A.

- Alternative C – Focused Portfolio
  - Industrial and Commercial Uses – Implementation of Alternative C would result in an increase in the number of acres of Trust Land

that would be modified from current land use and converted to industrial and/or commercial uses as compared to Alternatives B and B-1. Potential impacts to fisheries would be similar to those described under Alternative A.

- Residential Uses – Alternatives C would result in an increase in the number of acres converted to residential use under the Real Estate Management Program as compared to Alternatives A, B and B-1. (Under Alternative C-1 the number of acres converted to residential use could be reduced by as much as half of the projected amount.) Impacts to fisheries as a result of conversion to residential use under this alternative would be similar to impacts described under Alternative A.

4.2.7.3 Cumulative Impacts

Assuming that development is conducted in accordance with applicable storm water regulations and Best Management Practices are implemented to control sediment loss, implementation of any of the Alternatives would not result in an increased or additive impact (cumulative impact) to fisheries resources for any of the Real Estate Management Program designated land uses described above. None of the Alternatives would create a demand for conversion of current land use to commercial, industrial, or residential uses. Rather, the program alternatives analyzed in the Programmatic EIS would allow Montana to participate in the existing real estate growth market in the state.

4.2.7.4 Residual Adverse Impacts

No residual adverse effects to fisheries are anticipated to result from implementation of any of the Alternatives evaluated in this PEIS. Compliance with local zoning and subdivision laws and state and federal laws for controlling sedimentation and contamination of waterways and storm water runoff would reduce impacts to meet applicable standards that protect fish and aquatic resources.

4.2.7.5 Irretrievable and Irreversible Commitment of Resources

Implementation of any of the Alternatives would not result in an irreversible or irretrievable commitment of fisheries resources. Compliance with local, state, and federal requirements would limit impacts to fisheries associated with the Real Estate Management Program.

4.2.7.63 Short Term versus Long Term Productivity

Short-term impacts to the fisheries resource include impacts described above. These short-term impacts to fish are not expected to impact long-term productivity of fisheries resources on Trust Lands included in the program.

4.2.8 Wildlife

4.2.8.1 Statewide Overview

Over 650 vertebrate wildlife and 390 bird species have been recorded in Montana. Wildlife occurring on Trust Lands vary according to density and type of vegetation,

quantity and quality of water, climatic, and geomorphic conditions. Each Land Office area supports diverse populations of game animals, furbearers, rodents, upland game birds, raptors, waterfowl, and migratory birds. The Montana Natural Heritage Program lists 161 species of special concern including federally listed threatened and endangered species. Each Land Office area is home to various numbers of special status species.

Potential impacts from implementation of the any of the Alternatives to wildlife resources could include displacement of individuals to adjoining undeveloped areas; loss of certain individuals; increase in urban/suburban wildlife populations; increased wildlife/human interaction; direct loss of wildlife habitat due to land disturbance/construction activity; elimination of cover (nesting, hiding, thermal), breeding sites and forage; and a potential increase in wildlife mortality due to vehicle and powerline (birds) collisions.

Potential land development under all alternatives is projected to affect more land in western Montana (Northwest, Southwest, and Central Land Office areas [30,524 acres total]) than eastern Montana (Northeast, East, and South Land Office areas [3,747 acres total]). Potential impacts to wildlife and two endangered species (grizzly bear and gray wolf) occurring in western Montana Land Office areas would be mitigated by the greater amount of federal land available to provide respective species habitat that cannot be developed. Federal land in western Montana Land Office areas totals approximately 17.8 million acres versus 9.3 million acres in eastern Montana Land Office areas.

Descriptions of existing wildlife resources on Montana and Trust Land is included in Chapter 3 – Affected Environment. Descriptions of the Alternatives are included in Chapter 2.

4.2.8.2 Direct and Indirect Impacts

The direct and indirect impacts are addressed under each alternative. It is assumed that conservation uses under all alternatives would have no affect on fisheries resources.

- Alternative A – Current Program
  - Industrial and Commercial Uses – Implementation of Alternative A would result in conversion of current land uses on selected Trust Lands (agriculture, grazing, or timber) to industrial and/or commercial uses.

    Potential effects on wildlife resources include displacement to adjoining undeveloped lands; loss of certain individuals; increase in urban/suburban wildlife populations and increased wildlife/human interaction; direct loss of wildlife habitat due to land disturbance/construction activity could eliminate cover (nesting, hiding, thermal), breeding sites and forage; and potential increase in wildlife mortality due to vehicle and power line (birds) collisions.

- Residential Uses – Continuation of the current Real Estate Management Program would result in conversion of selected Trust Lands to Residential uses. Potential effects to wildlife from residential development would be similar to those described for commercial/industrial use. However, residential development would likely occur on the urban fringe where some wildlife species (deer, bears, and mountain lions) are becoming habituated to human activity and would continue to inhabit suburban residential areas.

  Developers of residential lands would be required to comply with applicable regulations and requirements pertaining to special status species prior to development of residential properties.

- Alternatives B – Diversified Portfolio and B-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives B and B-1 would result in an increase in the number of acres of Trust Land that would be reclassified from current land use and converted to industrial and/or commercial uses as compared to Alternative A. Potential impacts to wildlife from implementation of Alternatives B and B-1 would be similar to those described under Alternative A.

  - Residential Uses – Alternatives B and B-1 would result in an increase in the number of acres converted to Residential use under the Real Estate Management Program as compared to Alternative A. Alternative B-1 would reduce the number of acres placed in residential use by up to one half. Impacts to wildlife resources as a result of conversion to residential use under this alternative would be similar to impacts described under Alternative A. However, the increased number of residential areas would increase the amount of urban-wildland interface. Increased amount of urban fringe development would likely increase the number of encounters between humans and wildlife.

- Alternatives C – Focused Portfolio and C-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives C and C-1 would result in an increase in the number of acres of Trust Land that would be modified from current land use and converted to industrial and/or commercial uses as compared to Alternatives B and B-1. Potential impacts to wildlife resources would be similar to those described under Alternative A.

  - Residential Uses – Alternatives C and C-1 would result in an increase in the number of acres converted to Residential use under the Real Estate Management Program as compared to Alternatives A, B and B-1. Alternative C-1 would reduce the number of acres

placed in residential use by up to one half. Impacts to wildlife resources as a result of conversion to residential use under this alternative would be a function of the increased number of acres of urban-wildland interface that would result. Any increase in the urban-wildland areas could increase the contact between humans and wildlife. Potential impacts to wildlife resources would be similar to those described under Alternative A.

4.2.8.3 Cumulative Effects

Implementation of any of the Alternatives would not result in an increased or additive impact (cumulative impact) to wildlife resources for any of the Real Estate Management Program designated land uses described above. The Alternatives would not create a demand for conversion of current land use to commercial, industrial, or residential uses; rather, the program alternatives analyzed in the PEIS would allow the REMB to participate in the existing real estate growth market in the state.

To the extent that eligible Trust Lands are located in areas where wildlife use is high, conversion of these lands may result in creating an additive impact associated with human-wildlife contacts.

4.2.8.4 Residual Adverse Effects

No residual adverse effects to wildlife are anticipated to result from implementation of any of the Alternatives evaluated in this PEIS. Compliance with state and federal laws concerning special status species would reduce impacts to permissible levels.

4.2.8.5 Irretrievable and Irreversible Commitments of Resources

Implementation of any of the Alternatives would not result in an irreversible or irretrievable commitment of wildlife resources. Compliance with state and federal requirements would limit impacts to special status species associated with the Real Estate Management Program.

4.2.8.6 Short Term versus Long Term Productivity

Short-term impacts to wildlife resources include impacts described under Alternative A above. These short-term impacts to wildlife are not expected to impact long-term productivity of wildlife resources on Trust Lands included in the program.

4.2.9 Reptiles and Amphibians

4.2.9.1 Statewide Overview

The Montana Natural Heritage Program lists 16 species of amphibians and 17 species of reptiles that occur in Montana. Amphibians and reptiles do not produce enough metabolic heat to maintain body temperature higher than their environment ("cold-blooded"). Their dependence on the temperature of the environment prevents them from using some habitats and necessitates hibernation through winter months.

Amphibians are usually associated with moist habitats (wetlands), many are aquatic or semi-aquatic, and all breed in water. Amphibians are common and widely distributed across Montana. There are five amphibian species of concern of which, some or all occur in each land office area.

Reptiles include turtles, snakes, and lizards. Reptiles are widely distributed and occur in nearly all habitat types across Montana. The Montana Natural Heritage Program lists two turtles, three lizards, and four snakes as species of special concern of which, some or all occur in each land office area.

Potential impacts from implementation of any of the Alternatives to amphibians and reptiles include displacement to adjoining undeveloped areas; loss of certain individuals; and direct loss of suitable habitat due to land disturbance/construction activity that eliminates cover, breeding areas, and forage. Potential impacts to amphibians and reptiles are not distinguishable by geographic land office area.

Descriptions of existing amphibians and reptiles on Montana and Trust Land is included in Chapter 3 – Affected Environment. Descriptions of the Alternatives are included in Chapter 2.

4.2.9.2 Direct and Indirect Impacts

The direct and indirect impacts are addressed under each alternative. It is assumed that conservation uses under all alternatives would have no affect on reptiles and amphibians.

- Alternative A – Current Program
  - Industrial and Commercial Uses – Implementation of Alternative A would result in conversion of current land uses on selected Trust Lands (agriculture, grazing, or timber) to industrial and/or commercial uses.

    Amphibian and reptile species with low mobility would likely die during initial land disturbance activities (construction). Species with greater mobility would be displaced to adjacent habitat, if available. Some species may reestablish on the tract after habitat is restored or suitable habitat created.

  - Residential Uses – Continuation of the current Real Estate Management Program would result in conversion of selected Trust Lands to Residential uses. Potential effects to amphibians and reptiles from residential development would be similar to those described for commercial/industrial use. Developers of residential lands would be required to comply with applicable regulations and requirements pertaining to species of special concern prior to development of residential properties.

- Alternatives B – Diversified Portfolio and B-1 – Conservation Priority

- Industrial and Commercial Uses – Implementation of Alternatives B and B-1 would result in an increase in the number of acres of Trust Land that would be reclassified from current land use and converted to industrial and/or commercial uses as compared to Alternative A. Potential impacts to amphibians and reptiles would be similar to those described under Alternative A.

- Residential Uses – Alternatives B and B-1 would result in an increase in the number of acres converted to Residential use under the Real Estate Management Program as compared to Alternative A. Alternative B-1 could reduce the number of residential acres developed by as much as one half. For those species that are sufficiently mobile, movement to adjacent undeveloped land would reduce impacts associated with increased residential development. Impacts to amphibians and reptiles as a result of conversion to residential use under this alternative would be similar to impacts described under Alternative A.

- Alternatives C – Focused Portfolio and C-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternative C and C-1 would result in an increase in the number of acres of Trust Land that would be modified from current land use and converted to industrial and/or commercial uses as compared to Alternative B. Potential impacts to amphibians and reptiles would be similar to those described under Alternative A.

  - Residential Uses – Alternatives C and C-1 would result in an increase in the number of acres converted to Residential use under the Real Estate Management Program as compared to Alternative B. For those species that are able to move to adjacent, undeveloped areas, potential impacts would be minimal. Impacts to amphibians and reptiles as a result of conversion to residential use under this alternative would be similar to impacts described under Alternative A.

4.2.9.3 Cumulative Effects

Implementation of any of the Alternatives would not result in an increased or additive impact (cumulative impact) to amphibians and reptiles for any of the Real Estate Management Program designated land uses described above. The Alternatives would not create a demand for conversion of current land use to commercial, industrial, or residential uses. Rather, the program alternatives analyzed in the PEIS would allow the REMB to participate in the existing real estate growth market in the state.

4.2.9.4 Residual Adverse Effects

No residual adverse effects to amphibians and reptiles are anticipated to result from implementation of any of the Alternatives evaluated in this PEIS. Compliance with

state and federal laws concerning species of special concern would reduce impacts to permissible levels.

4.2.9.5 Irretrievable and Irreversible Commitment of Resources

Implementation of the any of the Alternatives would not result in an irreversible or irretrievable commitment of amphibians and reptiles. Compliance with state and federal requirements would limit impacts to species of special concern associated with the Real Estate Management Program.

4.2.9.6 Short Term versus Long Term Productivity

Short-term impacts to amphibians and reptiles include impacts described above. These short-term impacts to amphibians and reptiles are not expected to impact long-term productivity of amphibians and reptiles on Trust Lands included in the program.

4.2.10 Vegetation

4.2.10.1 Statewide Overview

Vegetation communities in Montana are diverse due to the range of climatic conditions, geology, and topographic settings. These communities range from spruce-fir and cedar-hemlock forests in the Northwest Land Office to grasslands and juniper woodland in the Southeast Land Office. Private and Trust Land that can support agricultural and grazing practices has been converted from its natural state to enable these activities to occur. Other areas have been set-aside in their natural state as wilderness areas or parklands.

Noxious weeds are present in all counties in Montana. The estimated weed infestation rate in Montana is 9 percent per year.

No endangered plant species are known to occur in Montana; however, two threatened species occur in the state and on Trust Land in the Northwest Land Office and in the Southwest and Central Land Office areas. Each land office area contains rare plant species unique to that region and some species occupy more than one region.

Descriptions of vegetation resources in Montana and on Trust Land are included in Chapter 3 – Affected Environment. Descriptions of the Alternatives are included in Chapter 2.

4.2.10.2 Direct and Indirect Impacts

The direct and indirect impacts are addressed under each alternative. It is assumed that conservation uses under all alternatives would have no affect on vegetation.

- Alternative A – Current Program
  - Industrial and Commercial Uses – Implementation of Alternative A would result in conversion of the current land use on selected Trust Lands (agriculture, grazing, or timber) to industrial and/or

commercial uses. Potential effects on vegetation resources on Trust Lands from conversion to commercial and industrial land uses include:

- Removal of vegetative cover during construction activities
- Decrease in vegetative cover in areas where pavement or road building occurs
- Decrease in diversity in vegetation on lands where primary use was timber or grazing
- Change in species to engineered or designed landscape species.

Commercial and industrial development of these lands would likely occur within locally zoned areas where specific landscaping requirements apply. Developers are typically required to control noxious weeds within local zoning areas in Montana. Developers would also be required to avoid impacting threatened, endangered, and special status species.

- Residential Uses – Continuation of the current Real Estate Management Program would result in conversion of selected Trust Lands to residential uses. Trust Lands in the Northwest, Central, and Southwest Land Office areas most attractive for residential development are typically timbered lands. As such, conversion of timber lands to residential would likely result in a decrease in forest canopy and increase the amount of sunlight reaching the forest floor. This change could result in a change in snow depth, runoff characteristics, and understory growth locally. Increased emphasis on fire suppression on former timber lands converted to residential could result in reduction in the effects of fire on controlling forest health, understory growth, and fuel load. The potential to impact special status species would exist though mitigation and/or avoidance measures would be implemented to reduce or eliminate potential effects.

  Depending on the status of weed infestation on Trust Lands selected for conversion to residential use, noxious weed infestations could increase in response to land disturbance, construction, and vehicle movement within specific lands. Use of noxious treatment methods to control or eradicate infestations would be the responsibility of individual homeowners within a tract unless organized weed control efforts are developed.

- Alternatives B – Diversified Portfolio and B-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives B and B-1 would result in doubling the number of acres of Trust Land that would be reclassified from current land use and converted to industrial and/or commercial uses as compared to

Alternative A. Potential impacts to vegetation resources would be similar to those described under Alternative A.

- Residential Uses – Alternative B would result in doubling the number of acres converted to residential use under the Real Estate Management Program as compared to Alternative A. Alternative B-1 would reduce the number of acres converted to residential use by up to one half. Impacts to vegetation resources on Trust Land as a result of conversion to residential under this alternative would be similar to impacts described under Alternative A.

- Alternatives C – Focused Portfolio and C-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives C and C-1 would result in doubling the number of acres of Trust Land that would be modified from current land use and converted to industrial and/or commercial uses as compared to Alternatives B and B-1. Potential impacts to vegetation resources would be similar to those described under Alternative A.

  - Residential Uses – Alternative C would result in doubling the number of acres converted to residential use under the Real Estate Management Program as compared to Alternative B. Alternative C-1 would reduce the number of acres converted to residential use by up to one half. Impacts to vegetation resources on Trust Land as a result of conversion to residential use under this alternative would be similar to impacts described under Alternative A.

4.2.10.3 Cumulative Effects

Implementation of any of the Alternatives would not result in an increased or additive impact (cumulative impact) to vegetation for any of the "other" designated land uses described above. Continuation of the Current Program (Alternative A) or implementation of any of the action Alternatives would not create additional demand for conversion of current land use to commercial, industrial, or residential uses. Rather, the program alternatives analyzed in the PEIS would allow the REMB to participate in the existing growth market in the state.

4.2.10.4 Residual Adverse Effects

No residual adverse effects to vegetation resources are anticipated to result from implementation of any of the alternatives evaluated in this Programmatic EIS.

4.2.10.5 Irretrievable and Irreversible Commitments of Resources

Implementation of the Proposed Action and alternatives would not result in an irreversible or irretrievable commitment of vegetation resources.

4.2.10.6 Short Term versus Long Term Productivity

Short-term impacts to vegetation include impacts described under Alternative A above. These impacts would impact vegetative productivity associated with the prior land use. Depending on the length of time that selected lands are used for

commercial, industrial, or residential uses, the potential for returning the land to productive vegetative use may be possible.

4.2.11 Air Quality

4.2.11.1 State Wide Overview

Potential effects on air quality in Montana are more dependent on the amount of growth and restrictions placed on that growth, rather than on the exact locations where the growth occurs. Air quality is a regional concept, and cannot be applied to individual land parcels that may or may not be converted from the current land use to industrial/commercial or residential use. The air quality of the future does not depend on whether Trust Land or adjacent lands are developed; it depends on the rules and regulations under which the development occurs.

Air quality in Montana cannot be deteriorated from the 1975/1988 baseline levels because the EPA has established Prevention of Significant Deterioration (PSD) increments that limit incremental degradation. Any new development must meet these Federal requirements, whether the development occurs on Trust Land or not.

Descriptions of existing air quality on and around Trust Land is included in Chapter 3 – Affected Environment. Descriptions of the Alternatives are included in Chapter 2.

4.2.11.2 Direct and Indirect Impacts

The direct and indirect impacts are addressed under each alternative. It is assumed that conservation uses under all alternatives would have no affect on air quality.

- Alternative A – Current Program
  - Industrial and Commercial Uses – Implementation of Alternative A would result in conversion of the current land use on selected Trust Lands (agriculture, grazing, or timber) to industrial and/or commercial uses. Potential effects on air quality include increased emissions of criteria pollutants such as carbon monoxide, lead, sulfur compounds, nitrogen compounds, ozone, and particulate matter. Specific pollutants emitted depend on the nature of the industrial/commercial facility that is built. As all major new sources would be required to meet air quality standards, any proposed facility would be required to limit emissions to permissible levels. By law, industrial sources located within 100km of a Class I area are required to demonstrate compliance with Federal and State standards as described in Chapter 3. Traditionally, this radius is extended from 100km to 200km when doing Air Quality Related Value (AQRV) analyses to demonstrate compliance.

    Increased emissions due to construction are expected. However, these emissions are generally much lower than those of the final

plant or facility, and are seldom enough to violate Federal or State standards.

- Residential Uses – Continuation of the current Real Estate Management Program would result in conversion of selected Trust Lands to residential uses. Increases in automobile-related emissions (e.g. carbon monoxide, nitrogen dioxide) and some increases in emissions of particulate matter due to residential wood smoke would result. If the concentration of new housing is high enough, and if the development occurs in areas where persistent inversion layers form (e.g. valleys), then particulate matter concentrations would increase. If that occurs, mechanisms would be employed by EPA to bring the State into air quality compliance.

  Increased emissions due to construction of housing would be expected. However, these emissions would be short-lived and do not generally violate Federal or State standards.

- Alternatives B – Diversified Portfolio and B-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives B and B-1 would result in an overall increase of Trust Land that would be reclassified from current land use and converted to industrial and/or commercial uses as compared to Alternative A. Potential impacts to air quality would be similar to those described under Alternative A, and would be subject to the same regulations and compliance demonstration requirements.

    The amount of industrial/commercial development is unlikely to be affected by whether additional Trust Lands or adjacent non-Trust Lands are developed. Since emissions affect the air quality on a regional scale, only the amount of development affects air quality.

  - Residential Uses – Alternatives B and B-1 would result in an increase in the number of acres converted to Residential use under the Real Estate Management Program as compared to Alternative A. Alternative B-1 would reduce the number of residential acres by up to one half. Impacts to Trust Land as a result of conversion to residential use under this alternative would be similar to impacts described under Alternative A.

    The amount of residential development is unlikely to be affected by whether additional Trust Land or adjacent non-Trust Land are developed. Since emissions affect the air quality on a regional scale, only the scale of development affects air quality.

- Alternatives C – Focused Portfolio and C-1 – Conservation Priority

- Industrial and Commercial Uses – Implementation of Alternatives C and C-1 would result in an increase in the number of acres of Trust Land that would be modified from current land use and converted to industrial and/or commercial uses as compared to Alternative A. Potential impacts to air quality would be similar to those described under Alternative A.

  The amount of industrial/commercial development is unlikely to be affected by whether additional Trust Lands or adjacent non-Trust Lands are developed. Since emissions affect the air quality on a regional scale, only the amount of development affects air quality.

- Residential Uses – Alternatives C and C-1 would result in an increase in the number of acres converted to Residential use under the Real Estate Management Program as compared to Alternative A and B. Under Alternative C-1 the number of acres converted to residential use could be reduced by as much as half of the projected amount. Impacts to Trust Land as a result of conversion to residential use under this alternative would be similar to impacts described under Alternative A, B and B-1.

  The amount of residential development is unlikely to be affected by whether additional Trust Land or adjacent non-Trust Land are developed. Since emissions affect the air quality on a regional scale, only the amount of development affects air quality.

4.2.11.3 Cumulative Effects

Implementation of any of the Alternatives would not result in an increased or additive impact (cumulative impact) to degradation of air quality for any of the designated land uses described above. None of the Alternatives would create a demand for conversion of current land use to any of the designations described. Rather, the program alternatives analyzed in the PEIS would allow the REMB to participate in the existing real estate growth market in the state.

4.2.11.4 Residual Adverse Effects

No residual adverse effects to air quality are anticipated to result from implementation of any of the Alternatives evaluated in this PEIS. Compliance with local, state, and federal laws for controlling new emission sources would reduce impacts to permissible levels.

4.2.11.5 Irretrievable and Irreversible Commitment of Resources

Implementation of the any of the Alternatives would not result in an irreversible or irretrievable commitment of air quality related resources. Compliance with local, state, and federal requirements would limit emissions associated with the Real Estate Management Program.

4.2.11.6 Short Term versus Long Term Productivity

Short-term impacts to air quality include impacts described above. These short-term impacts are not expected to impact the long-term air quality on or near Trust Lands included in the Real Estate Management Program.

4.2.12 Noise

4.2.12.1 Statewide Overview

Noise is identified, as "unwanted sound" that could result from change in use of Trust Lands from current activities to commercial, industrial, or residential uses. Noise emanating from Trust Land varies in accordance with the location of the tract, proximity of the receiver to the source (sensitive receptor), and the noise generating activity on or near a specific tract.

Descriptions of noise levels in Montana and on Trust Land is included in Chapter 3 – Affected Environment. Descriptions of the Alternatives are included in Chapter 2.

4.2.12.2 Direct and Indirect Impacts

The direct and indirect impacts are addressed under each alternative. It is assumed that conservation uses under all alternatives would not increase noise levels.

- Alternative A – Current Program
  - Industrial and Commercial Uses – Implementation of Alternative A would result in conversion of the current land use on selected Trust Lands (agriculture, grazing, or timber) to industrial and/or commercial uses. Depending on the type of activity, conversion of land use to industrial or commercial use could result in a change in noise levels emanating from a particular tract of land. Where the industrial or commercial activity would occur inside a building, the noise levels affecting sensitive receptors might not change from levels associated with the prior land use. In other cases, the type of activity may result in an increase in noise levels over prior land uses.

    Several Montana communities have adopted noise ordinances that apply to commercial and industrial sites within city limits. Compliance with noise ordinances would limit noise emissions from new sources.

  - Residential Uses – Continuation of the current Real Estate Management Program would result in conversion of selected Trust Lands to residential uses. Most activity would occur in the western portion of Montana.

    Noise sources associated with residential property typically include loud stereo or audio equipment, vehicles, and emergency response vehicles. Depending on the location of the selected trust tract,

conversion to residential use may or may not result in noticeable change in noise levels. For lands that are presently surrounded or are within existing residential areas, conversion of the trust tract would likely not result in noise levels in excess of adjacent areas.

- Alternatives B – Diversified Portfolio and B-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives B and B-1 would result in approximately twice the number of acres of Trust Land that would be reclassified from current land use and converted to industrial and/or commercial uses as compared to Alternative A. Potential impacts to sensitive receptors from noise levels associated with implementation of Alternatives B and B-1 would be similar to those described under Alternative A.

  - Residential Uses – Alternative B would result in doubling the number of acres converted to residential use under the Real Estate Management Program as compared to Alternative A. Under Alternative B-1 the number of acres converted to residential use could be reduced by as much as half of the projected amount. Impacts from noise emissions associated with residential uses under this alternative would be similar to impacts described under Alternative A.

- Alternatives C – Focused Portfolio and C-1 – Conservation Priority

  - Industrial and Commercial Uses – Implementation of Alternatives C and C-1 would result in doubling the number of acres of Trust Land that would be modified from current land use and converted to industrial and/or commercial uses as compared to Alternative B. Potential impacts to sensitive receptors from noise levels associated with implementation of Alternative C would be similar to those described under Alternative A.

  - Residential Uses – Alternative C would result in doubling the number of acres of eligible Trust Land converted to residential use under the Real Estate Management Program as compared to Alternative B. Under Alternative C-1 the number of acres converted to residential use could be reduced by as much as half of the projected amount. Impacts from noise emissions associated with residential uses under this alternative would be similar to impacts described under Alternatives A, B and B-1.

4.2.12.3 Cumulative Effects

Implementation of any of the Alternatives would not result in an increased or additive impact (cumulative impact) to sensitive receptors as a result of changes in noise levels associated with designated land uses described above. Continuation of the Current Program (Alternative A) or implementation of the action Alternatives

would not create additional demand for conversion of current land use to commercial, industrial, or residential uses. Rather, the program alternatives analyzed in the PEIS would allow The REMB to participate in the existing real estate growth market in the state.

4.2.12.4 Residual Adverse Effects

No residual adverse effects from noise levels are anticipated to result from implementation of any of the alternatives evaluated in this P EIS. Compliance with local zoning and subdivision regulations for controlling noise levels would result in activities on Trust Land being compatible with surrounding areas.

4.2.12.5 Irretrievable and Irreversible Commitments of Resources

Not applicable

4.2.12.6 Short Term versus Long Term Productivity

Not applicable

4.2.13 Aesthetics

4.2.13.1 Statewide Overview

Montana's landscape is comprised of diverse topography including the Rocky Mountains in the western one-third of the state and the Great Plains in the eastern two-thirds of the state broken by various island mountain ranges and badlands. The variety of landscapes across the state results in widely differing aesthetics to the viewer.

Descriptions of aesthetic resources in Montana and Trust Land are included in Chapter 3 – Affected Environment. Descriptions of the Alternatives are included in Chapter 2.

4.2.13.2 Direct and Indirect Impacts

The direct and indirect impacts are addressed under each alternative. It is assumed that conservation uses under all alternatives would not impact aesthetic resources.

- Alternative A – Current Program
  - Commercial and Industrial Uses – Implementation of Alternative A would result in conversion of current land uses on selected Trust Lands (agriculture, grazing, or timber) to industrial and/or commercial uses.

    Because most of the projected use of Trust Land for commercial and industrial uses is expected to occur within urban areas, the potential effects on aesthetic resources would be limited. Existing infrastructure of municipalities has modified the landscape and established an urban – suburban visual characteristic. Addition of commercial or industrial facilities to the existing setting would not result in modifications to the natural landscape.

- Residential Uses – Continuation of the current Real Estate Management Program would result in conversion of selected Trust Lands to residential uses. Potential effects on aesthetic resources from residential development include increased urban sprawl comprised of housing, roads, and utility corridors. These landscape modifications would include changes in form, color, texture, and line of the natural landscape. In some circumstances, development of Trust Lands may avoid situations where development would occur around or bi-passing the trust tract; thereby increasing sprawl.

  Developers of residential lands may be required to design subdivisions or housing development with the natural landscape receiving consideration. Retaining the natural landscape as much as practicable would reduce impacts to aesthetic resources.

- Alternatives B – Diversified Portfolio and B-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives B and B-1 would result in an increase of Trust Land that would be reclassified from current land use and converted to industrial and/or commercial uses as compared to Alternative A. Potential impacts to aesthetic resources would be similar to those described under Alternative A.

  - Residential Uses – Alternative B would result in an increase in the number of acres converted to residential use under the Real Estate Management Program as compared to Alternative A. Under Alternative B-1 the number of acres converted to residential use could be reduced by as much as half of the projected amount. Impacts to aesthetic resources as a result of conversion to residential use under this alternative would be similar to impacts described under Alternative A. However, increased acreage conversion to residential in certain areas could result in greater modification to the landscape as compared to Alternative A.

- Alternatives C – Focused Portfolio and C-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives C and C-1 would result in an increase in the number of acres of Trust Land that would be modified from current land use and converted to industrial and/or commercial uses as compared to Alternatives B and B-1. Potential impacts to aesthetic resources would be similar to those described under Alternative A because development would largely occur within areas where the landscape has already been modified by urban development.

  - Residential Uses – Alternatives C and C-1 would result in an increase in the number of acres converted to residential use under

the Real Estate Management Program as compared to Alternatives B and B-1. Under Alternative C-1 the number of acres converted to residential use could be reduced by as much as half of the projected amount. Impacts to aesthetic resources as a result of conversion to residential use under this alternative would be similar to impacts described under Alternatives B and B-1. However, increased acreage conversion to residential in certain areas could result in greater modification to the landscape as compared to Alternative A.

4.2.13.3 Cumulative Effects

Commercial and industrial development is expected to occur primarily within urban areas where municipal infrastructure has already modified the natural landscape; therefore, addition of commercial and industrial development on Trust Lands is not expected to add measurably to existing landscape characteristics. Development of residential uses on Trust Lands may add to the visual changes evolving from urban – suburban sprawl ongoing in many areas of the state. None of the Alternatives would create a demand for conversion of current land use to commercial, industrial, or residential uses. Rather, the program alternatives analyzed in the PEIS would allow The REMB to participate in the existing real estate growth market in the state.

4.2.13.4 Residual Adverse Effects

Residual adverse effects on aesthetic resources are anticipated to result from implementation of any of the Alternatives evaluated in this PEIS. Compliance with local zoning and subdivision regulations (where applicable) and incorporation of natural landscape retention in residential development design would reduce residual effects from development.

4.2.13.5 Irretrievable and Irreversible Commitments of Resources

Implementation of the any of the Alternatives would not result in an irreversible or irretrievable commitment of aesthetic resources.

4.2.13.6 Short Term versus Long Term Productivity

Short-term impacts to aesthetic resources include impacts described above. Long-term productivity of the landscape, although modified by development, would not be affected.

4.2.14 Cultural Resources

4.2.14.1 Statewide Overview

Cultural and/or paleontologic resources exist on many Trust Lands throughout Montana. Potential impacts to these resources are not distinguishable by geographic land office area. State agencies are responsible for stewardship of significant historic and prehistoric resources on state-owned land in accordance with the Montana State Antiquities Act (§ 22-3-421—22-3-442, MCA). Stewardship requires systematic identification and evaluation of sites, buildings, and districts (groups of related buildings or sites) within a potential impact area, and considering the possibility and feasibility of preserving, avoiding, and/or mitigating potential adverse effects to

those sites or resources. Under all alternatives, information would be gathered by qualified persons regarding the presence of cultural and paleontologic resources as Trust Lands are developed as part of the current Real Estate Management Program for commercial, industrial, or residential lands.

General descriptions of cultural resources in Montana are included in Chapter 3 – Affected Environment. Descriptions of the Alternatives are included in Chapter 2.

4.2.14.2 Direct and Indirect Impacts

The direct and indirect impacts are addressed under each alternative. It is assumed that conservation uses under all alternatives would not impact aesthetic resources.

- Alternative A – Current Program
  - Industrial and Commercial Uses – Implementation of Alternative A would result in conversion of current land uses on selected Trust Lands (agriculture, grazing, or timber) to industrial and/or commercial uses. The estimated number of acres to be converted to industrial and/or commercial use under Alternative A ranges from 52 in the Eastern Land Office area to 809 in the Central Land Office area.

    Qualified DNRC personnel will conduct cultural/paleontologic resource surveys of Trust Lands selected for commercial and/or industrial development in accordance with the Montana State Antiquities Act prior to any groundbreaking activities. These surveys are required to identify cultural and paleontologic resources within a proposed project area, and to gather sufficient data to generate informed recommendations directed toward limiting, avoiding, or otherwise mitigating impacts to state owned Heritage Properties and scientifically significant paleontologic resources.

  - Residential Uses – Continuation of the current Real Estate Management Program would result in conversion of selected Trust Lands to residential uses. The estimated number of acres to be converted to residential use under Alternative A ranges from 21 in the Eastern Land Office to 2,705 in the Northwest Land Office.

    In some circumstances, development of Trust Lands where cultural or paleontologic resources have not been identified may avoid situations where development would otherwise occur outside Trust Lands where cultural/paleontologic resource surveys are not required.

- Alternatives B – Diversified Portfolio and B-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives B and B-1 would result in an increase in the number of acres of Trust Land that would be reclassified from current land use and

converted to industrial and/or commercial uses as compared to Alternative A. Potential impacts to cultural and paleontologic resources will be similar under all Alternatives. However, the Montana State Antiquities Act directs state land managing agencies to consider the consequences of proposed impacts to cultural and paleontologic resources through a three step process. The first step is on the ground identification of cultural and paleontologic resources in a project area. The second step is to evaluate the historical, cultural and scientific significance of those resources following a standardized set of criteria. The third step is to consider the feasibility of designing steps to limit, avoid, or otherwise mitigate impacts to those state owned resources determined to be historically, culturally, or scientifically significant cultural resources (Heritage Properties), or scientifically significant paleontologic resources.

- Residential Uses – Alternatives B and B-1 would result in an increase in the number of acres converted to residential use under the Real Estate Management Program as compared to Alternative A. Under Alternative B-1 the number of acres converted to residential use could be reduced by as much as half of the projected amount. Potential impacts to cultural and paleontologic resources will be similar under all Alternatives, however, the Montana State Antiquities Act directs state land managing agencies to consider the consequences of proposed impacts to cultural and paleontologic resources through a three step process. The first step is on the ground identification of cultural and paleontologic resources in a project area. The second step is to evaluate the historical, cultural and scientific significance of those resources following a standardized set of criteria. The third step is to consider the feasibility of designing steps to limit, avoid, or otherwise mitigate impacts to those state owned resources determined to be historically, culturally, or scientifically significant cultural resources (Heritage Properties), or scientifically significant paleontologic resources.

- Alternatives C – Focused Portfolio and C-1 – Conservation Priority
  - Industrial and Commercial Uses – Implementation of Alternatives C and C-1 would result in an increase in the number of acres of Trust Land that would be modified from current land use and converted to industrial and/or commercial uses as compared to Alternatives B and B-1. Development under Alternative C over Alternatives B and B-1 by land office area is generally by a factor of two. Potential impacts to cultural and paleontologic resources will be similar under all Alternatives, however, the Montana State Antiquities Act directs state land managing agencies to consider the consequences of proposed impacts to cultural and paleontologic

resources through a three step process. The first step is on the ground identification of cultural and paleontologic resources in a project area. The second step is to evaluate the historical, cultural and scientific significance of those resources following a standardized set of criteria. The third step is to consider the feasibility of designing steps to limit, avoid, or otherwise mitigate impacts to those state owned resources determined to be historically, culturally, or scientifically significant cultural resources (Heritage Properties), or scientifically significant paleontologic resources.

- Residential Uses – Alternatives C and C-1 would result in an increase in the number of acres converted to residential use under the Real Estate Management Program as compared to Alternatives B and B-1. Under Alternative C-1 the number of acres converted to residential use could be reduced by as much as half of the projected amount. Conversion to residential use would range from 38 acres in the Eastern Land Office area to 5,410 acres in the Northwest Land Office area under Alternative C. Eastern Montana Land Office areas would see a combined total of 812 acres of conversion versus 11,143 acres in the western area. Reclassification of 11,143 acres to residential use in the western Montana Land Office areas would represent 0.9 percent of the total developable Trust Lands in those Land Office areas. Potential impacts to cultural and paleontologic resources will be similar under all Alternatives, however, the Montana State Antiquities Act directs state land managing agencies to consider the consequences of proposed impacts to cultural and paleontologic resources through a three step process. The first step is on the ground identification of cultural and paleontologic resources in a project area. The second step is to evaluate the historical, cultural and scientific significance of those resources following a standardized set of criteria. The third step is to consider the feasibility of designing steps to limit, avoid, or otherwise mitigate impacts to those state owned resources determined to be historically, culturally, or scientifically significant cultural resources (Heritage Properties), or scientifically significant paleontologic resources.

4.2.14.3 Cumulative Effects

Commercial and industrial development is expected to occur within urban areas where municipal infrastructure has already modified the natural landscape; therefore, addition of commercial and industrial development on Trust Lands is not expected to measurably increase impacts to cultural or paleontologic resources. Development of residential uses on Trust Lands may increase potential impacts to cultural and paleontologic resources on previously undisturbed land. However, required cultural and paleontologic resource surveys are required to identify cultural and paleontologic resources within a proposed project area, and to gather sufficient data to generate

informed recommendations directed toward limiting, avoiding, or otherwise mitigating impacts to state owned Heritage Properties and scientifically significant paleontologic resources. Because of the nonrenewable nature of cultural and paleontologic resources, most disruptive impacts will be permanent and irreversible.

None of the Alternatives would create a demand for conversion of current land use to commercial, industrial, or residential uses. Rather, the program alternatives analyzed in the Programmatic EIS would allow the REMB to participate in the existing real estate growth market in the state.

4.2.14.4 Residual Adverse Effects

Because of the nonrenewable nature of cultural and paleontologic resources, most disruptive impacts will be permanent and irreversible. Residual adverse effects thus could result from implementation of any of the Alternatives evaluated in this PEIS. Ultimately, however, compliance with the Montana State Antiquities Act would reduce any potential residual effects from development.

4.2.14.5 Irretrievable and Irreversible Commitments of Resources

Because of the nonrenewable nature of cultural and paleontologic resources, most disruptive impacts will be permanent and irreversible. Implementation of any of the Alternatives could result in irreversible or irretrievable commitments of cultural or paleontologic resources. Ultimately, however, compliance with the Montana State Antiquities Act would reduce irreversible or irretrievable commitments of significant cultural or paleontologic resources.

4.2.14.6 Short Term Uses versus Long Term Productivity

Because of the nonrenewable nature of cultural and paleontologic resources, most disruptive impacts will be permanent and irreversible. Short-term impacts to cultural and paleontologic resources include impacts described above. Long-term productivity of the landscape, although modified by development, would not be affected. Ultimately, however, compliance with the Montana State Antiquities Act would reduce adverse effects to Heritage Properties and scientifically significant paleontologic resources.

4.2.15 Community Infrastructure

4.2.15.1 Statewide Overview

The condition of community infrastructure varies across the state. Transportation systems, sewer and water facilities, public facilities and services generally reflect local economic conditions and the ability of the tax base to support construction and maintenance. Typically communities prepare capital improvement plans to address overall community infrastructure and services needs, based on need and the availability of financing. Projects are typically financed through a combination of state and federal funding and local mechanisms including special improvement districts, general obligation and revenue bonds, and direct appropriation.

Montana's land use statutes, particularly the Montana Subdivision and Annexation statutes require extension of services to support new development. The costs associated with the provision of streets, sidewalks, lighting, sewer, and water are typically paid by the developer and/or the ultimate owners of the property involved.

4.2.15.2 Direct and Indirect Impacts

The direct and indirect impacts are addressed under each alternative. It is assumed that conservation uses under all alternatives would not impact community infrastructure and services.

- Alternative A – Current Program
  - Industrial and Commercial Uses – The REMB would rely on the developer to build and finance the infrastructure necessary to support any new activity or to participate fully in community-wide efforts to make infrastructure improvements. The REMB, through its industrial and commercial lessees would participate in Special Improvement District programs to finance capital improvements and to pay any user fees associated with the provision of services such as sewer, water and garbage disposal.

  - Residential Uses – Under Alternative A, proposals for residential development would be largely developer initiated. Adherence to local land use regulatory processes, particularly subdivision requirements would ensure that community infrastructure and services needs would be addressed.

- Alternatives B – Diversified Portfolio and B-1 – Conservation Priority
  - Industrial and Commercial Uses – The REMB would rely largely on developers and lessees to address infrastructure requirements associated with particular projects. However, under Alternative B, the REMB will be more active in assisting developers in identifying infrastructure needs and in locating potential resources for implementing projects. Up to $500,000 per year would be available to improve land entitlements, such as extension of infrastructure facilities. The economic analysis (Appendix D) suggests that up-front expenditures to improve entitlements to raw land would increase the average rate of return to the Trusts.

  - Residential Uses – Proposals for residential development under Alternatives B and B-1 would be largely developer initiated. Adherence to local land use regulatory processes, particularly subdivision requirements would help assure that community infrastructure and services needs would be addressed. However, in addition, the REMB would direct some of its staff resources to in overall community improvements planning in order to better position its land with respect to existing and planned community infrastructure development.

- Alternatives C – Focused Portfolio and C-1 – Conservation Priority
  - Industrial and Commercial Uses – Greater emphasis would be given to the acquisition of existing commercial (including multi-family residential properties) and industrial facilities. In most cases, these facilities would already have the necessary community infrastructure and services in place. Also under Alternatives C and C-1, the REMB would work with potential lessees and the local government to identify appropriate strategies for addressing infrastructure requirements for new development. Up to $1 million per year would be available to improve land entitlements, such as extension of infrastructure facilities. The economic analysis (Appendix D) suggests that up-front expenditures to improve entitlements to raw land would increase the average rate of return to the Trusts.

  - Residential Uses – As under Alternatives A, B and B-1, developers of residential properties would largely be responsible for addressing community infrastructure and services needs. Some infrastructure improvements to raw land could be initiated by the REMB to improve land entitlements.

4.2.15.3 Cumulative Effects

Under all the Alternatives the REMB would share in community growth. While the percentage of development on Trust Land would vary by alternative, demand on overall community infrastructure would remain a constant. What distinguishes the alternatives from each other is the degree to which the REMB would engage in addressing infrastructure requirements associated with its residential, commercial and industrial programs. In addition, under all Alternatives, the REMB would follow land use regulatory processes, and work with the local governing bodies and project developers to assure that impacts on community infrastructure and services were appropriately addressed. Finally, as part of the site selection process presented in Chapter 2, the proximity and availability of infrastructure to Trust Lands would serve as an indicator to the suitability of land for future use and development (see Figure 2-4 and associated narrative).

4.2.15.4 Residual Adverse Effects

There will be no residual adverse effects.

4.2.15.5 Irretrievable and Irreversible Commitments of Resources

Not Applicable

4.2.15.6 Short Term versus Long Term Productivity

Not Applicable

4.2.16 Taxation – Property Tax

4.2.16.1 Statewide Overview

Property in Montana is subject to advalorem taxes levied on the basis of property type and value. The Montana legislature has determined that different types of property and property used for different purposes should be taxed at different rates and bear a different proportion of the overall tax burden. Under 15-6-101MCA, the state has identified a variety of property classifications. Among these are Class 3 – Agriculture, Class 4 – residential and commercial real estate, Class 10 – Forested Lands, and eight other classifications. (Industrial properties are classified under a variety of categories depending on the specific type of industry). The classification rates for residential, commercial and industrial properties are generally higher than those for timber and agricultural properties.

Property tax rates are calculated in the following manner: The assessed valuation of the property is multiplied by the classification rate to obtain the taxable value. Taxable values are then multiplied by the local mill levy to derive the actual tax. A mill is equal to 1/1000 of the entire taxable value of the jurisdiction of the county and municipality within which the property is located. The number of mills levied varies by jurisdiction and is dependent on the overall tax base. Property taxes are levied on both the value of the land and on any improvements. Generally, approximately two thirds of the property taxes collected help fund the local public system, K-12. Seven mills are directed to the state university system and the remaining one third supports local government services and infrastructure. Non-permanent residential improvements such as trailers and recreational cabins located on leased properties are taxed under Montana's personal property statutes.

- Special Fees and Assessments – In addition to property taxation, land and improvements are subject to a variety of special fees for services (garbage, fire and ambulance) and capital improvements (streets, sidewalks, sewers, lighting). Payments for these services are often paid through special improvement districts (SID's) or Rural Improvement Districts (RID's). Properties exempt from advalorem taxes are not necessarily exempt from special fees.

- Exemptions – Lands and improvements owned by local, state and federal government agencies are exempt from property taxes as are properties owned by certain non-profit organizations.

- Beneficial Use Taxes – Exempt land and improvements that are leased to a private entity engaged in a business activity are subject to taxation. Under 15-24-1203, MCA a tax is imposed and must be collected tax "upon the possession or other beneficial use for industrial, trade or other business purposes enjoyed by any private individual, association or corporation of any property, real or personal, that for any reason is exempt from taxation." The tax is calculated in the same manner as for non-exempt properties.

4.2.16.2 Direct and Indirect Impacts

The direct and indirect impacts are addressed under each alternative. It is assumed that conservation uses under all alternatives would not affect property tax levels.

- Alternative A – Current Program – Under Alternative A, residential, industrial and commercial growth on Trust Lands would be less [based on a proportional share of land base] than the rate of growth expected on other lands within the region. As a result, the development of residential, commercial and industrial uses on Trust Lands would contribute a corresponding amount to the tax base. This would occur through the payment of beneficial use taxes by lessees of commercial and industrial properties, the payment of personal property tax on residential improvements (cabins and trailers) located on leased residential lands, and the payment of property taxes on residential properties acquired through purchase of former Trust Lands.

- Alternatives B – Diversified Portfolio and B-1 – Conservation Priority – Under Alternatives B and B-1, the REMB would expect to share in direct proportion [proportionate share of land ownership] to the rate of growth in the region. As a result, the development of residential, commercial and industrial uses on Trust Lands would contribute a corresponding amount to the tax base. This would occur through the payment of beneficial use taxes by lessees of commercial and industrial properties, the payment of personal property tax on residential improvements (cabins and trailers) located on leased residential lands, and the payment of property taxes on residential properties acquired through purchase of former Trust Lands.

- Alternatives C – Focused Portfolio and C-1 – Conservation Priority – Under Alternatives C and C-1, the REMB would expect to share in a proportionately larger share (based on proportion of land ownership) of the expected growth in a region. As a result, the development of residential, commercial and industrial uses on Trust Lands would contribute a corresponding amount to the tax base. This would occur through the payment of beneficial use taxes by lessees of commercial and industrial properties, the payment of personal property tax on residential improvements (cabins and trailers) located on leased residential lands, and the payment of property taxes on residential properties acquired through purchase of former Trust Lands.

4.2.16.3 Cumulative Effects

Commercial and Residential properties – land and improvements – are taxed at the same rate under Montana's property tax statutes. Industrial development is taxed at various rates depending on the type of industry. As a general rule, property taxes are

equal to approximately 2% of the market value of land and improvements for commercial and residential properties. The percentage rate for industrial properties varies. Regardless of the Alternative, the development of commercial, residential and industrial uses, will add to the local property tax base.

It is also important to note that the development of commercial, residential and industrial uses provides would revenue to the beneficiaries of the Trust in three ways:

- Providing direct revenue to the State Trust
- Providing property tax revenue to local school districts
- Increasing the local bonding capacity to finance infrastructure improvements including those for schools.

4.2.16.4 Residual Adverse Effects

Not Applicable

4.2.16.5 Irretrievable and Irreversible Commitments of Resources

Not Applicable

4.2.16.6 Short Term versus Long Term Productivity

As property values increase over time, the development of commercial, residential and industrial uses on Trust Lands will increasingly contribute to the local tax base through property tax payments.

4.2.17 State Equalization Payments to Counties

4.2.17.1 Statewide Overview

In 1965, legislation was adopted providing for reimbursement to counties for loss of revenue where tax-exempt state land constituted in excess of 6% of total land area. Funds were paid to counties and distributed to the elementary districts (60% of the payment) and to the county road funds (40%). Subsequent changes in Montana statute have addressed the incorporation of the Trust Land Management program into the Montana Department of Natural Resources and Conservation and associated administrative changes. In 2001, the state overhauled its entire system of shared revenues. However, counties continue to be reimbursed for the tax-exempt state land in excess of 6% of the total land area pursuant to the original intent of the 1965 legislation. Over the past four years, the total amount paid to counties has averaged $550,000 annually.

4.2.17.2 Direct and Indirect Impacts

The purpose of state the state equalization program is to compensate counties for lost tax revenue from tax-exempt state lands. Under all Alternatives, when Trust Lands are sold or leased for residential, commercial, or industrial uses, the resulting beneficial tax or direct property tax payments would more than compensate the counties for any lost equalization payments.

4.2.17.3 Cumulative Effects

Overall, counties will continue to benefit from Trust Lands located within their jurisdictions under all Alternatives. In areas where the development of residential, commercial and industrial uses is less likely to occur, equalization payments will continue to provide county governments with needed funds. In areas where the REMB is more active, the local jurisdictions will benefit from increased property taxes associated with economic activity on Trust Lands as well as from equalization payments.

4.2.17.4 Residual Adverse Effects

Not Applicable

4.2.17.5 Irretrievable and Irreversible Commitments of Resources

Not Applicable

4.2.17.6 Short Term versus Long Term Productivity

Not Applicable

4.3 MONITORING AND ACCOUNTING

4.3.1 Monitoring

A monitoring program would follow the "life" of the plan. The purpose of the monitoring plan is three fold. First the monitoring program would provide an ongoing evaluation of how the selected plan is being implemented in relationship to key growth indices. This would be primarily accomplished by comparing actual community growth (population and economy) in a land office region to actual growth and activities (leases, licenses, sales, easements, exchanges) on Trust lands. Growth is a trend measurement so monitoring checks would be at year 8 (2010) of the plan and at 5 year intervals thereafter. Secondly, the original assumptions of the plan would be monitored. Though the REMB might be properly implementing the plan, are the results as anticipated and, if not, do the assumptions need to be adjusted? Thirdly, the monitoring plan would include an evaluation of any effects of unforeseen changes in the physical, social, or economic conditions. This DEIS attempts to look almost 21 years into the future and unanticipated circumstances can be expected that cannot be reasonably anticipated at this time.

Monitoring reports would include summary information as listed below:

- Actual population and economic growth in land office regions and the state.
- Comparison of growth on trust lands (commercial, conservation, industrial, residential) to projections of Plan by Land office and state regions.
- Location and types of projects on trust lands reviewed by local regulatory processes (zoning, subdivision, annexation, extension of services, building permits, growth policy including neighborhood plans).
- Revenue return to the trusts from residential, commercial, industrial, and conservation uses by transaction category (lease, license, easement, sale).
- REMB staff (numbers & type) and program funding.
- Acres of land sales, exchanges, purchases by land use type.

- Balance account relative to HCP (refer to Table 3-13 and final HCP plan); reflects location and type of use on lands included in the HCP.
- Number of lands reclassified to "other" by location and original land classification with description of major affected natural and physical features of the project area.

A report to the TLMD and Board of Land Commissioners would be made at the intervals identified above. The reports would serve as a basis to test conformity to the assumptions of the selected plan and to identify processes to modify the plan as appropriate and necessary to make mid-course adjustments.

The REMB plan needs to be dynamic in the sense that this is a land use plan and implementation is affected by outside market forces and internally by legislation, Land Board policies, and funding, among others. Identification and implementation of projects (yet to be identified) is typically a multi-year process. Land use projects could occur gradually or in "spurts" or a combination of both. Years of trend information are necessary to fully assess the effectiveness of the assumptions. For this same rationale, local communities in Montana typically have a 20 year horizon for growth policies with interim updates as needed. The REMB plan should be allowed to "mature" to avoid premature adjustments before accurate and sufficient trend data can be compiled and properly assessed. More immediate reasons to amend the Plan could include the following critical situations:

- Funding is not available to achieve the selected management philosophy of the plan;
- Required legislative remedies to achieve the selected management philosophy are not accomplished or other legislation is enacted contrary to the selected plan;
- Certain critical elements of the plan are either not supported or implemented by the Board of Land Commissioners; or
- The Trust Land Management Division Administrator judges that the original assumptions supporting the Plan no longer apply.

Minor changes or additions that do not conflict with the overall management philosophy of the select Plan would not require programmatic review. This could include short-term fluctuations (5 year average) in project implementation (acres of new development or conservation lands), staffing changes, or funding allocations.